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## **An In-depth Analysis of Government Debt to GDP of the three Selected African Countries and its effects on their Economy: Nigeria, South Africa, and Ghana**

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### **Abstract**

This study investigated the effects of Government debt to GDP of the 3 selected African Countries and the negativity on their economy using data from 2012-2020. The provable/empirical results showed that debt effects enhanced growth only on a short term and hindered growth in the long term. Debt servicing has negative impacts on the borrower country's economy because It takes large benefit from the domestic economy to transfer to the foreign economy. Therefore, the country foregoes some spectacular multiplier accelerator effects. Debt servicing, including interest payments and repayments, may also be a real leakage from an indebted country. The study suggested that government should channel the borrowed funds on both infrastructural development and the productive base of the economy, that will improve long-term economic growth, expand the revenue base, and strengthen the capacity to repay outstanding debts when due. Government should put in place debt management mechanism that will prevent government from default.

**Key words** Government debt, GDP, Debt management mechanism

## Introduction

The World economy today is interwoven which made it impossible for any country to operate in isolation. All countries in the World are integrated in one way or the other to the global economic system. Based on this fact, the three selected African countries under investigation need external sources of income for their developmental projects and to keep their government functioning properly. Countries internal resources are never enough for any meaningful projects, as a result, external resources are sourced for to complement the internal revenue. The motive behind external borrowing is because countries especially the developing ones lack sufficient internal financial resources and this calls for the need for foreign aid (Sulaiman, L.A, Azeez, B.A 2012). According to Pattillo et al, 2002; Safdari and Mehrizi, 2011, it is also expected that developing countries, facing a scarcity of capital, will seek external borrowings to supplement domestic saving.

Debt is something, usually money, borrowed by one party from another. Debt is used by many countries, corporations, and individuals to make large purchases that they could not afford under normal circumstances. A debt arrangement gives the borrowing party permission to borrow money under the condition that it is to be paid back later, usually with interest.

Hameed, Ashraf, and Chaudhary (2008) stated that external borrowing is ought to accelerate economic growth especially when domestic financial resources are inadequate and need to supplement with funds from abroad.

According to Professor Chukwuma Soludo (2003) he opined countries borrow for two broad reasons; macroeconomic reasons to either finance higher investment or higher consumption and to circumvent hard budget constraints. This implies that Government borrows to boost economic growth and alleviate poverty. He argued that when debt reaches a certain level, it begins to have adverse effect, debt servicing becomes a huge burden and countries find themselves on the wrong side of the debt-Laffer curve, with debt crowding out investment and growth.

Federal government debt-to-GDP ratio **measures the gross debt of the Federal government as a percentage of GDP**. It is a key indicator for the sustainability of government finance.

## Is government debt same as public debt?

The debt owed by **Central/national governments** is usually referred to as the national debt and is thus distinguished from the public debt of state and local government bodies. In the United States, bonds issued by the states and local governments are known as municipals.

The national debt can only be reduced through five mechanisms: increased taxation, reduced spending, debt restructuring, [monetization](#) of the debt, or outright default. The federal budget process directly deals with taxation and spending levels and can create recommendations for restructuring or possible default.

## Classification of Debt

Corporate and Individual debt can be classified into four main categories:

**Secured Debt**= Secured debt is collateralized debt. creditors (Debtors) usually require the collateral to be property or assets with a large enough value to cover the amount of the debt. Examples of collateral include vehicles, houses, boats, securities, and investments. These items are pledged as security and the agreement is created with a lien. Upon default, the collateral may be sold or liquidated, with the proceeds used to repay the loan. Like most classes of debt, secured debt often requires a vetting process to verify the creditworthiness of the borrower and their ability to pay. In addition to the standard review of income and employment status, the ability to pay may include verifying the collateral and assessing its value.

**Unsecured Debt**= Unsecured debt is debt that does not require collateral as security. The creditworthiness and the debtor's ability to repay are reviewed before consideration is given. Since no collateral instrument is issued, the debtor's credit profile is the primary factor used in determining whether to approve or deny lending. Examples of unsecured debt include credit cards, automobile loans, and student loans. How much is loaned is often based on the debtor's financial position, including how much they earn, how much liquid cash is available, and their employment status.

**Revolving debt**= Revolving debt is a line of credit or an amount that a borrower can continuously borrow from. In other words, the borrower may use funds up to a certain amount, pay it back, and borrow up to that amount again. The most common form of revolving debt is credit card debt. The card issuer initiates the agreement by offering a line of credit to the borrower. If the borrower fulfils their obligations, the line of credit is available for as long as the account is active. With a favourable repayment history, the amount of revolving debt may increase.

**Mortgaged debt**= A mortgage is a debt issued to purchase real estate, such as a house or condo. It is a form of secured debt as the subject real estate is used as collateral against the loan. However, mortgages are so unique that they deserve their own debt classification. There are different types of mortgage loans, including [Federal Housing Administration](#) (FHA), conventional, rural development, and [adjustable-rate mortgages](#) (ARMs), to name a few. In general, lenders use a baseline credit score for approval, and those minimum requirements may vary according to the type of mortgage. Mortgages are most likely the largest debt, apart from student loans, that consumers will ever owe. Mortgages are usually amortized over long periods, such as 15 or 30 years.

**Corporations** issue debt in the form of bonds to raise capital. In addition to loans and credit card debt, companies that need to borrow funds have other debt options. Bonds and [commercial paper](#) are common types of corporate debt that are not available to individuals.

## Background of Study

The three selected African countries have been borrowing money over the years to finance their developmental plans, such loans are obtained from multilateral institutions such as International Monetary Fund, European Union, World bank, African developmental bank etc and bilateral around the globe such as China, Russia, Japan, Germany, USA et al.

Reinhart and Rogoff (2010) provided long historical data series for the analysis of public-debt-to-GDP ratios and economic growth. Their finding is that public-debt-to-GDP ratios above 90%

are associated with markedly lower economic growth rates. While several leading policymakers in the US and Europe directly referred to Reinhart and Rogoff (2010) as a threshold for immediate fiscal consolidation measures to reign in public debt (e.g. Konzelmann 2014).

Asley (2002) opined that high level of external debt in developing country negatively impact their trade capacities and performance.

The Central Bank (CBN) is the bankers bank and financial adviser to the federal government and as such, it is charged with the responsibility for managing the public debt. It usually guides the federal government on the needs for external borrowing and its effects on the economy.

The most interesting point here is that loans enhanced short-term growth and long-term negative effects on their economy. The conditions usually attached to most of these loans are so unfavourable that the borrowers might end up having negative growth at the long run. A swift example is the current condition given to Nigeria by IMF, which urged Nigeria government to devalue her currency and stop subsidizing PMS (petroleum). The key question here is that the end of subsidy will trigger off hyper- inflation which will bring about an untold hardship to the masses. Similar conditions are offered to both south Africa and Ghana whenever they seek loans. These types of conditions given to emerging countries made it almost impossible for them to achieve the aims and objectives of the loans.

Chowdhury K (1994) argued that external debt burden leads to bad management in highly indebted countries such as exchange rate mismanagement. The expectation of currency devaluation leads to speculative capital flight. Devaluation also causes the currency cost of debt service obligations, deteriorates budget deficit, and affect money supply and inflation.

### **Effects of High debt to GDP on the countries under Investigation**

The higher the debt-to-GDP ratio, the less likely the country will pay back its debt and the higher its risk of default, which could cause a financial panic in the domestic and international markets.

A high debt-to-GDP ratio is undesirable for a country, as a higher ratio indicates a higher risk of default. In a study conducted by the World Bank, a ratio that exceeds 77% for an extended period may result in an adverse impact on economic growth.

Debt-to-GDP measures the financial leverage of an economy. One of the Euro convergence criteria was that government debt-to-GDP should not be more than 60%.

Debt decreases a government ability to invest in producing and marketing exports, building infrastructure, and establishing a skilled labour force. Muhtar (2004) also stated that, the servicing of these debts has direct negative impact on economic development. He says “debt services encroached on resources needed for socio economic development and poverty reduction. It also contributed to negative net resources flow”.

According to Hla and Krueger (2009) economic development is the increase in the standard of living in a nation's population with sustained growth from a simple, low-income economy to a modern, high-income economy. Also, if the local quality of life could be improved, economic development would be enhanced. Its scope includes the process and policies by which a nation



improves the economic, political, and social well-being of its people (O'Sullivan & Steven; 2003). The nature of the relationship between public external borrowings and economic performance of nations has over the years been a subject of academic debate.

### **Consequences of High Debt to Ghana, Nigeria, and South Africa**

The four main consequences are:

- Lower national savings and income.
- Higher interest payments, leading to large tax hikes and spending cuts.
- Decreased ability to respond to problems.
- Greater risk of a fiscal crisis

### **Research methodology**

To get an overview of the volume of debt to GDP of the three selected African countries, and its effects on their economy, we used secondary data for an in-depth and comprehensive analysis. This is quite imperative for us to know the effects of debt to GDP. We used data from 2012 -2020.

### **South Africa Government Debt to GDP from 2012-2020**

South African debt to GDP have been increasing over the years under investigation, and the multiplier effects are enormous on the economy.

How much does SA owe China? South Africa owes an estimated *four percent of its annual gross domestic product* to China (2022). The country received multiple tranches of Chinese loans, some of which have raised concerns about opaque conditions and alleged links to corruption.

How much does South Africa owe World Bank?

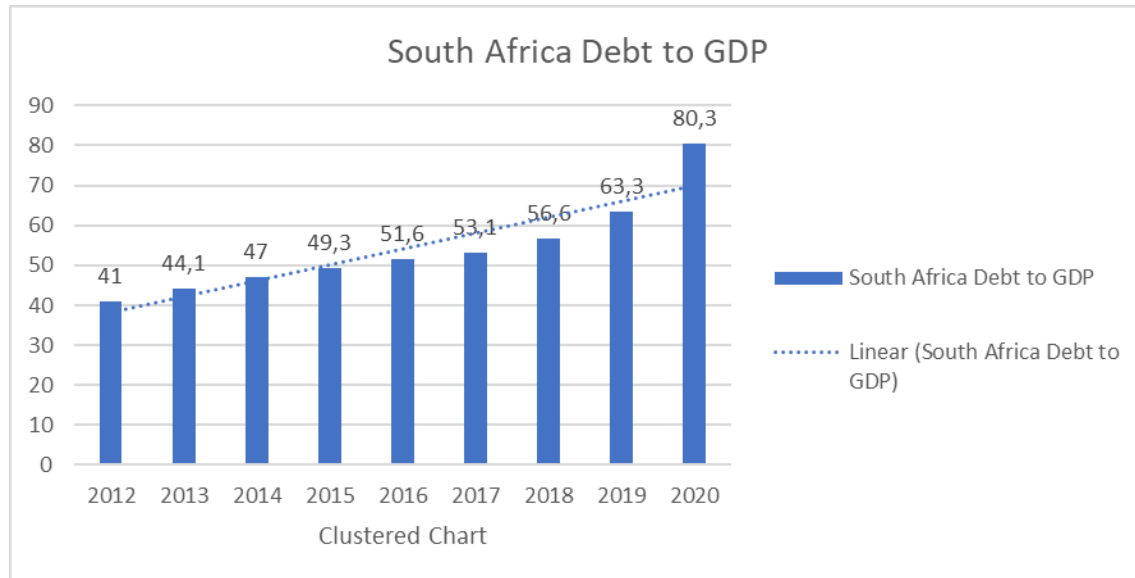
*The country's \$4.3 billion (R70-billion) loan from the IMF is payable over a period of five years at an interest rate of 1.1%*

### **How much does South Africa owe in 2021?**

In the latest reports according to SA debt management, South Africa National Government Debt reached **275.2 USD bn** in Oct 2021. The country's Nominal GDP reached 85.8 USD bn in Dec 2020.

**Table 1. Showing South African Debt to GDP from 2012-2020**

2012	2013	2014	2015	2016	2017	2018	2019	2020
41	44.1	47	49.3	51.6	53.1	56.6	63.3	80.3



Generally, Government debt as a percent of GDP is used by investors to measure a country's ability to make future payments on its debt, thus affecting the country borrowing costs and government bond yields.

### Nigeria Government Debt to GDP from 2012-2020

Nigeria government debt to GDP continue to increase throughout the period under investigation, except in 2014. This has posed a tremendous challenge to her economic growth and development.

The higher the debt-to-GDP ratio, *the less likely the country will pay back its debt and the higher its risk of default*, which could cause a financial panic in the domestic and international markets. Nigeria's debt to equity ratio in 2018 was 27.7%, in 2019 it increased to 29.1% and for 2020, 35%.

### *Effect of debt on Nigeria economic growth*

This study investigated the effect of government debt on Nigeria's economic growth using annual data from 2012 to 2020 and the Autoregressive Distributed Lag technique. The empirical results shows that external debt *constituted an impediment to long-term growth* while its short-term effect was growth-enhancing.

### Major Nigeria Creditors in Focus

As of March 31, 2020, the Total Borrowing by Nigeria from China was USD3. 121 billion (₦1,126.68 trillion at USD/₦361). This amount represents only **3.94%** of Nigeria's Total Public Debt of USD79. 303 billion (₦28,628.49 billion at USD/₦361) as of March 31, 2020.

As of December 31, 2019, Nigeria owed \$3.18bn to the Exim Bank of China, \$76.13m to France's Agence Francaise Development, \$361.75m to Japan International Cooperation Agency, \$32.14m to the Exim Bank of India, and **\$202.27m** to Germany's Kreditanstalt Fur Wiederaufbua.

### **Nigeria External and Internal Debt Analysis in 2020/2021**

Nigeria's external debt rose to **\$37.96 billion** as of Q3 2021, moving from \$33.47 billion recorded in the previous quarter. The increase in the country's external debt was driven by the 4 billion Eurobond raised from the international debt market to boost the country's external reserve above \$40 billion.

Nigeria spent a sum of \$520.78 million on external debt servicing in the third quarter of 2021, rising by 74.2% compared to \$298.9 million recorded in the preceding quarter (Q2 2021). This is contained in the quarterly debt report, released by the Debt Management Office (DMO).

A look at the data shows that a sum of \$1.82 billion has been used to service external debts between January and September 2021. This is 43.9% higher than the \$1.27 billion spent in the corresponding period of 2020.

On the other hand, domestic debt servicing rose significantly by 150.5% from N322.75 billion recorded in Q2 2021 to N808.49 billion in Q3 2021. This takes the year-to-date domestic debt service to N1.74 trillion from N1.53 trillion recorded in the same period of 2020.

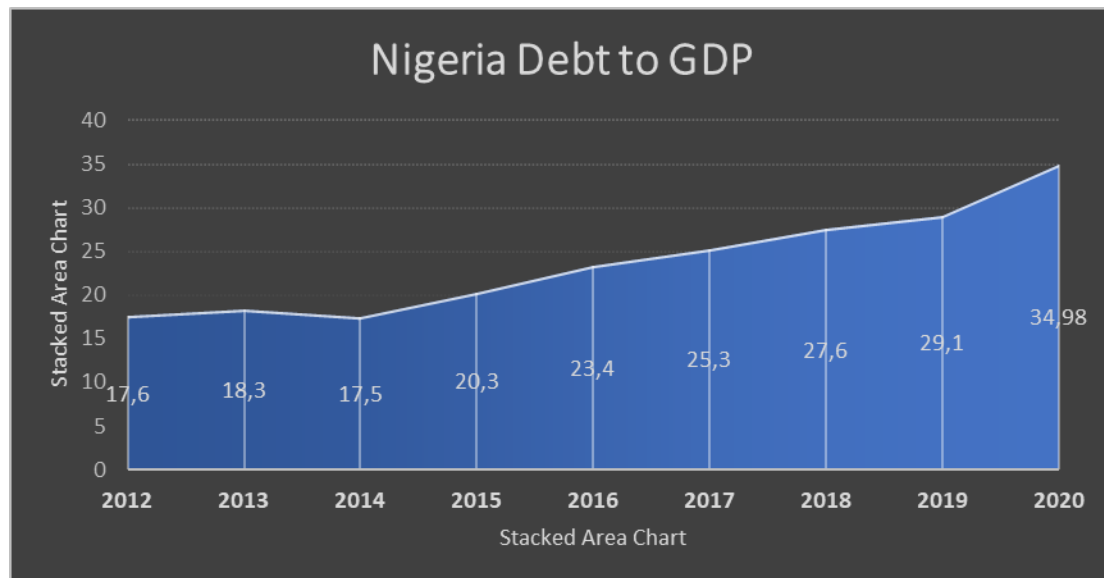
The increase in debt service comes on the back of the significant jump in the country's debt profile. Nigeria's external debt rose to \$37.96 billion as of Q3 2021, moving from \$33.47 billion recorded in the previous quarter.

Recall that Nigeria raised a sum of \$4 billion in Eurobond in September, a capital raise which was dubbed one of the biggest financial trades on the African continent after the order book peaked at \$12.2 billion, which enabled the federal government to raise an additional \$1 billion more than the intended \$3 billion capital raise.

On the other hand, domestic debts also recorded an uptick as federal government domestic debt stock rose to \$44.44 billion, while state domestic debts increased to \$10.23 billion.

**Table 2. Showing Nigeria debt to GDP from 2012-2020.**

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Indicator	17.6	18.3	17.5	20.3	23.4	25.3	27.6	29.10	34.98



Stacked area chart showing Nigeria Debt to GDP from 2012-2020

### Ghana Government Debt to GDP from 2012-2020

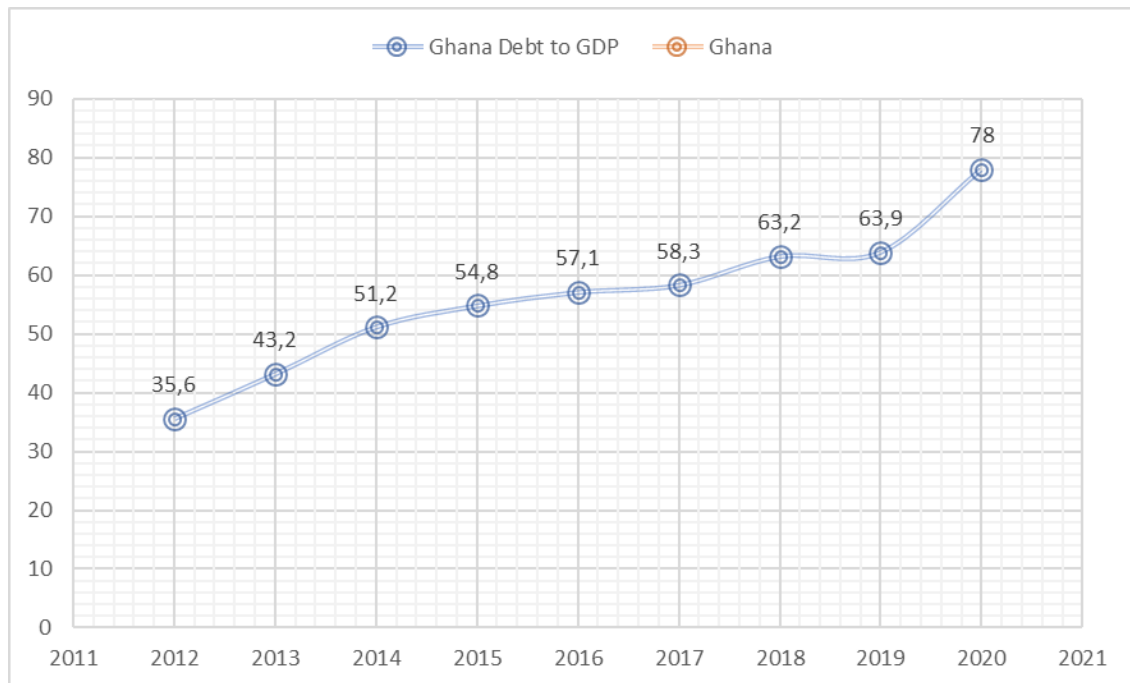
During the period under investigation, Ghanaian National debt to GDP continued to increase unabated, and these has posed gigantic challenges to her economic development. The cost of her debt servicing continued to rise throughout the period.

How much money is Ghana owing China? Ghana - Its debt to China sits at \$3.5 billion (about Sh350 billion).

According to the data from the Bank of Ghana, the domestic debt went up to **¢178.1 billion** in September 2021, up from ¢173.9 billion recorded in July 2021. This is equivalent to 40.5% of GDP. For the external debt, it fell by \$100m in August to \$27.9 billion in September 2021, equivalent to 37.2% of GDP.

**Table 3. Showing Ghana Debt to GDP from 2012-2020**

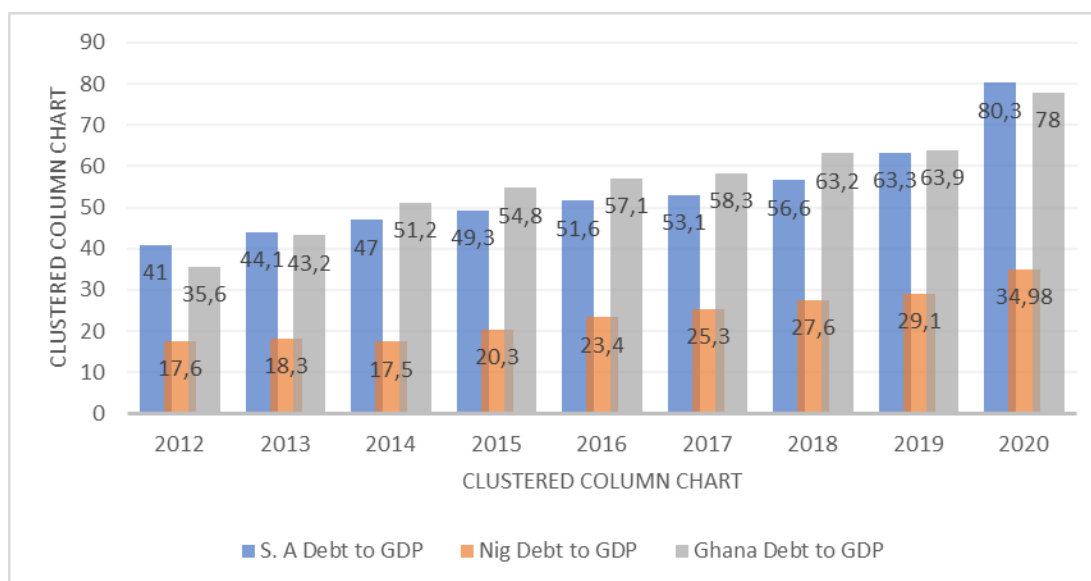
Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Indicator	35.6	43.2	51.2	54.8	57.1	58.3	63.2	63.9	78



Scattered Chart showing Ghanaian Debt to GDP from 2012-2020

**Table 4. showing government debt to GDP of South Africa, Nigeria, and Ghana from 2012-2020**

Country	Indicator	2012	2013	2014	2015	2016	2017	2018	2019	2020
S. A	Debt to GDP	41	44.1	47	49.3	51.6	53.1	56.6	63.3	80.3
Nig	Debt to GDP	17.6	18.3	17.5	20.3	23.4	25.3	27.6	29.1	34.98
Ghana	Debt to GDP	35.6	43.2	51.2	54.8	57.1	58.3	63.2	63.9	78



## Results and analysis

Results of the findings were thoroughly analysed with the use of graphs and tables. These help us to precisely know the effects of Government debt to GDP of the three selected African Countries economy.

During the period under investigation, South African Government debt to GDP continued to increase unabated, and this has serious effect on her economy. For example, the value of Rand continued to depreciate throughout the period.

During the period under investigation, Ghanaian Government debt to GDP continued to increase throughout the period, the value of CEDI continued to depreciate, which in turn leads to high cost of both export and import. Inflation has become a huge problem to the masses, which resulted to a low standard of living, low savings, and low consumptions.

During the period under investigation, Nigeria Government debt to GDP continued to increase throughout the 9year period, except in 2014, when her debt to GDP decreased by 0.8%. Nigeria Government debt to GDP continued to affect her economic growth at the long, for example her currency has been devalued three times in the last two years. Her borrowing cost continued to increase. Throughout the period, Nigeria Federal reserves continued to decrease, because of high demand for foreign currencies for external trade.

## Conclusion and recommendations

Government debt to GDP is a double edge sword. Debt is used by government to finance developmental projects, which ordinarily cannot be financed through internal generated revenue. As a result, SA, Nigeria, and Ghana embraced the opportunities to carry out their developmental projects.

On the other hand, Government debt to GDP incurred by the three selected African countries during the period under investigation, called for an In-depth analysis of its effect on their economy. The cost of borrowing on the selected countries continued to increase and the value of their currencies continued to depreciate. The high cost of their debt servicing has grave effects on their economy, because a huge chunk of their revenue is used to pay their lenders.

The fact that, the three countries Government debt to GDP continued to grow year-in-year-out, it is already a bad signal to their economy, because no country in the World can attain reasonable development through such unabated borrowing culture.

### **Recommendations:**

In 2020, South Africa and Ghana Government-debt-to-GDP ratios are above 70%, these called for an immediate fiscal consolidation measure to reign in public debt, such as increase in interest rate, increase in tax rate, lowering of Government expenditure etc.

We also recommend that the three selected countries under investigation should set up debt payment mechanism that will enhance smooth debt payment and debt servicing.

We recommend that the three selected African countries ought to do more in fighting corruptions by setting up anti-corruption agencies that will monitor how loans are used. Debt is always a problem when the loans collected are not used for their purposes. We also recommend that before loans are secured, the masses should be notified through their representatives at the national assembly and also at the state assembly for their inputs.

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## **Ecological restoration in reducing urban vulnerability in the process of creating resilient cities**

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### **Abstract**

Climate change adaptation and disaster management perspectives are at the core of urban resilience. The quality of the city and urbanization is directly proportional to urban vulnerability. Being prepared for the problems, dangers, disasters, and risks cities face, and the capacity to respond to and adapt to them determine their urban resilience. In terms of danger, vulnerability, risk reduction capacity, emergency response and wound healing capacity, urban resilience includes the whole process from the stage of taking precautions before the disaster, identifying the dangers and vulnerabilities, and planning to disasters sensitively, to the emergency response/recovery stages after the disaster. Unplanned and unhealthy urbanization lead to the growth of insecure, discriminatory, and exclusionary negativities. Because the center of action regarding the development imperatives of the countries is directed towards urban areas, it becomes necessary, at the scale of resilient cities, to examine vulnerability and risk management in-depth, to encourage a multifaceted approach, and to identify potential opportunities. The concept of 'vulnerability' generally originates from natural disasters. There is increasing awareness of the cumulative impact that physical, social, economic, and systemic components have on cities' ability to resist vulnerability. Urban vulnerability is one of the biggest obstacles to sustainable development. Research on its evaluation and control in a regulatory way is of great importance both for improving the quality of urbanization and for ensuring sustainable development. Contemporary urbanization phenomenon requires reducing urban vulnerability and improving urbanization quality. Ecological restoration is planned as the process of helping to improve (recover) an ecosystem that has lost its property, is damaged or is destroyed. In this study, the urban vulnerability will be discussed comprehensively, and from a sustainable development perspective, reducing the negative effects of this process with ecological restoration practices in terms of urban ecological renewal will be focused on.

**Keywords:** City, urbanization, resilient cities, urban vulnerability, ecological restoration

## Education with AI & Machine Learning in a Post-Pandemic World

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### Abstract

The shift from the 20th to the 21st century has brought about a multitude of technological developments, particularly in the education sector. However, the recent COVID-19 pandemic has created substantial obstacles for students, not limited to but including economic difficulties, the digital divide, and lack of resources. Nevertheless, the pandemic also allowed for the flourishing of artificial intelligence (AI) & machine learning technologies, which can be utilized to mitigate these issues in education. This paper explores how AI & machine learning have been used to innovate current education institutions — including programs such as Educational Data Mining, Intelligent Tutoring Systems, and Adult Learning Systems among others — as well as the drawbacks to this approach and potential future applications for these technologies. Naturally, as a developing field there are many objections surrounding these technologies due to concerns such as data privacy, loss of soft skills, barriers to implementation, and more. But in spite of this resistance, many AI-driven educational initiatives have thrived. By analyzing past successes and failures, we hope to provide guidance for better employing these technologies in education in the future.

**Keywords:** Artificial intelligence, machine learning, exploratory learning environments, educational data mining, intelligent tutoring systems, adult learning systems

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## **Learning from Fast & Slow Fashion Supply Chains**

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### **Abstract**

Slow and fast fashion companies and their supply chains can learn a lot from each other. The fast fashion business model is often associated with short lead times, while the slow fashion business model is deemed to be more sustainable in nature. Therefore, many people believe that fast fashion companies do not have enough time to be concerned with the sustainability of their practices. This study seeks to determine whether fast fashion companies should be more concerned about the sustainability of their production. The findings show, among other things, that these fast fashion companies are also getting better in terms of building their business sustainability. This becomes clear when a total of 20 slow and 20 fast fashion companies are analyzed using the triple bottom line approach. As a result, it is safe to say that fashion companies' business models do not define whether or not they are concerned about the sustainability of their practices. Rather, it is each company's awareness of the environment that motivates them to implement sustainable, eco-friendly practices in their operations.

**Key words: Fast Fashion, Slow Fashion, Supply Chains, Triple Bottom Line**

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## 1. Introduction

Many scholars have criticized how fast fashion and slow fashion chains run. However, further analysis should focus on analyzing the business model of those chains as a learning model. In this regard, some people condemn fast fashion chains as not eco-friendly and exploiters of laborers. These chains associate themselves with quantity instead of quality (Watson et al., 2013). On the contrary, slow fashion chains focus on quality instead of quantity. Interestingly, fast fashion companies have started rethinking their business model as they seek to focus more on the sustainability of their business.

Considering the drawbacks of the fast fashion business model, people should not only focus on the economic aspects to assess its performance. Therefore, this study employs the triple bottom approach to measure the sustainability rate of 20 fast fashion and 20 slow fashion brands. This study aims to determine if the business models adopted by those companies are converging. Moreover, it also seeks to determine if fast fashion companies are less aware of environmental sustainability than slow fashion companies. This study hypothesizes that the environmental awareness of fashion companies does not depend on whether they are fast fashion or slow fashion businesses, but rather on their commitment toward the environment.

The first six sections of this paper outline the fast fashion and slow fashion business models, including the strategies that each model adopts and how they help companies achieve their business objectives. The seventh section presents the triple bottom line approach employed in this study. The eighth section presents all 20 fast fashion brands and 20 slow fashion brands involved in the study.

## 2. Fast Fashion as Best Practice

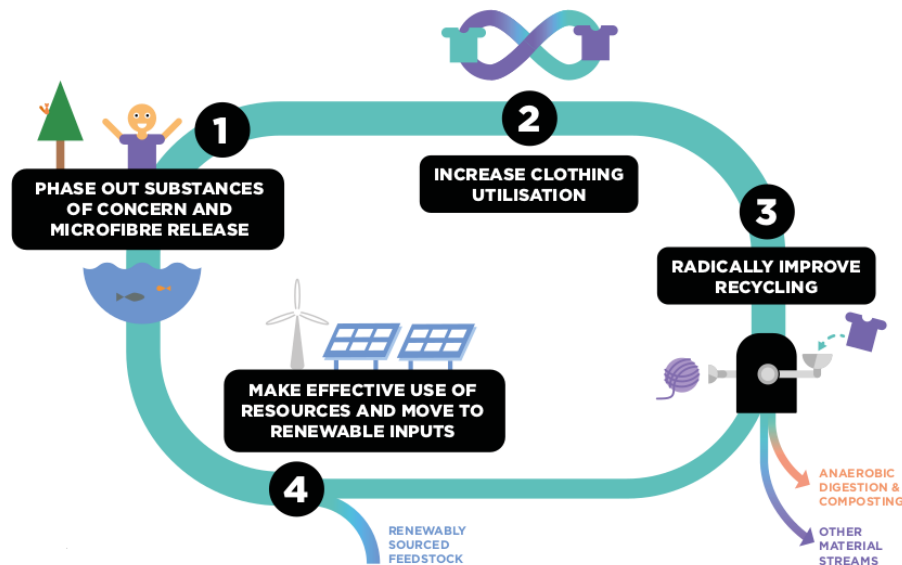
Some people consider the fast fashion business model the best practice due to its vast potential. The model offers several benefits, such as lead time reduction, proper time management, quick delivery, goods management, and inventory cost reduction (Tartaglione et al., 2013). However, these benefits should not nullify the model's drawbacks.

Fashion brands in the world are working on shortening their lead times. The term "lead time" refers to the time that spans between the phase of product design and the moment of its sale to the final consumer. According to Tartaglione et al. (2013), reducing lead times is achievable through the reduction of the following components:

- **Time to market:** The period from identifying a market opportunity to distributing finished products on the market.
- **Time to serve:** The period where the company distributes the products ordered by consumers to the stores.
- **Time to react:** The period that the company needs to adapt its products to changing demand.

### 3. Slowing fast Fashion down

Fast fashion companies adopt a linear business model. This model involves a large amount of non-renewable resources in the production of short-wearing clothing. After a short period of use, the garments end up in a landfill site or incineration. On the other hand, there is the circular economy, a system where clothes, textiles, and fibers will never end up as waste. The model offers several benefits to businesses, societies, and the environment (Ellen Macarthur Foundation, 2017). Figure 1 briefly indicates the idea of a circular economy.



**Figure 1:** The idea of a circular economy

Source: Ellen Macarthur Foundation, 2017

These days, fast fashion companies have started adopting the circular economy. Transparency can serve as a tool for sustainability. But as the Fashion Transparency Index shows, progress in transparency is still too slow. This index is published by the international fashion network "Fashion Revolution" and measures the world's top 250 fashion brands and retailers in providing information on social and environmental policies, practices, and impacts in their operations and supply chains (Ellen MacArthur Foundation, 2017; Fashion Revolution, 2021).

### 4. Fast fashion supply chains: common characteristics

There are common characteristics of fast fashion supply chains that help analysts understand how they work.



**Figure 2:** Common characteristics of Fast Fashion SCs

Source: own representation

Figure 2 shows some of those characteristics, such as shorter lead times from designer to manufacturer, replenishment strategy, and vertical integration. The latter refers to a condition where fast fashion retailers retain control over design, manufacturing, and delivery. The biggest fast fashion retailers perceive it as an arrangement where a company owns or controls more than one link in the supply chain. For example, a fast fashion retailer owns or controls its fashion suppliers, distributors, and retail locations. This agreement enables shorter turnaround times, which leads to the probability of catching up with popular fashion trends (Abdulgadir et al., 2020). A brand that adopts such a strategy is the Spanish clothier Zara. The company is a good example of vertical integration. It controls nearly its entire supply chain, from design and production to distribution to its stores worldwide (Guan et al., 2012).

### 5. Slow fashion supply chains: common characteristics

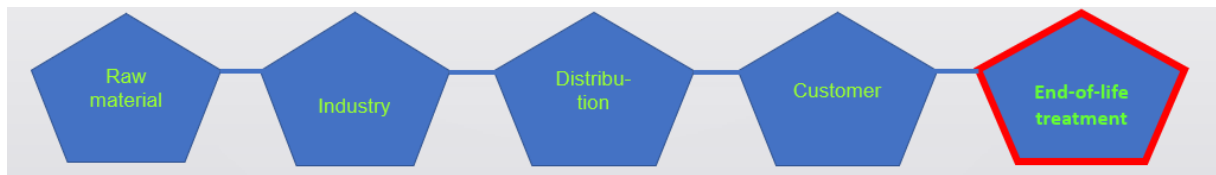
To better understand the slow fashion supply chains, one should first understand the components of the traditional supply chains, shown in Figure 3. These include raw materials, industry, distribution, customers, and waste (Henninger et al., 2015).



**Figure 3:** Slow fashion supply chains: key components

Source: own representation

In this figure, the fifth component of slow fashion supply chains is end-of-life-cycle treatment (Henninger et al., 2015) instead of waste (see Figure 4).



**Figure 4:** Slow fashion supply chains: key components

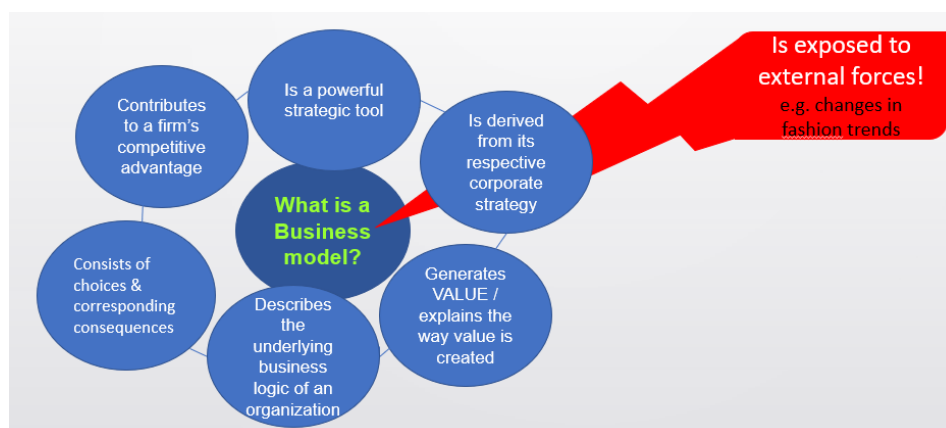
Source: own representation

## 6. Different Strategies for Slow and Fast fashion

It is interesting to investigate if both slow fashion and fast fashion companies can adopt the same supply chain strategy. The slow fashion business model was invented by Fletcher (2007) and proposes a different value compared to that of the fast fashion model. Such a value represents a different customer base which consists of customers that seek garments that are in line with their ethical values.

The statement "one size does not fit all" is also applicable in the SCM context. A company's supply chain strategy should focus on goals and actions depending on the business characteristics (Brun et al., 2008).

In addition, slow fashion supply chains deal with so-called functional products, while fast fashion supply chains deal with innovative products. According to Fisher (1997), functional products have three characteristics. First, they are products whose demands are independent of recent trends. Second, they are predictable for demand forecasting. Third, they have long life cycles. This type of product requires an efficient process. Innovative products, in contrast, are those where demand is based on trends and that have short life cycles. At first glance, it seems that clothing is a functional product because it serves a basic need. But fast fashion does not have stable demand. Plus, the life cycles of fast fashion products are short. To summarize, fashion was once a functional product, but through the creation of trends and season marketing, it has become innovative (Patrick, 2018). Figure 5 shows a sketch of the characteristics or benefits of a business model (Gockeln, 2014).



**Figure 5:** What is a Business model?

Source: own representation

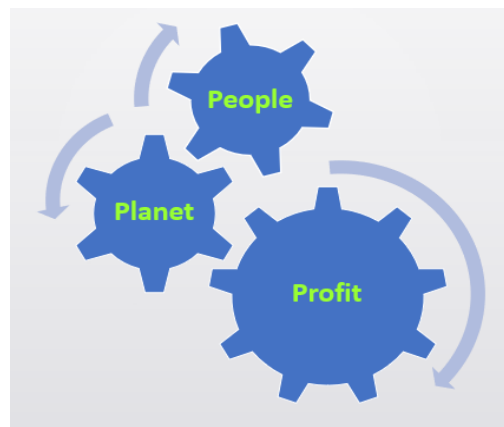
According to the actual definition of business models, it is safe to say that the models adopted by fast fashion companies are different from the ones adopted by slow-fashion companies. As figure 5 shows, a business model describes the underlying business logic of an organization. Slow and fast fashion companies have different business logic. In contrast to the traditional fashion business, the sustainable business logic is not based solely on the logic of growth (Fletcher, 2012). However, it is at least conceivable that the different paradigms of slow and fast fashion companies will converge due to exposure to external factors. Some of these factors, especially the macro-environmental ones like environmental awareness, convenient shopping needs, decrease in purchasing time, and reduction of carbon footprints, may force fast fashion companies to change their business model (Gockeln, 2014).

In summary, fast fashion and slow fashion companies should not adopt the same supply chain strategy due to the following reasons:

- A supply chain strategy should focus on a company's goals and actions. Slow and fast fashion companies are pursuing different goals. Therefore, they need different supply chain strategies.
- According to Fisher (1997), slow and fast fashion supply chains deal with different types of products.
- Different business models form the basis for slow and fast fashion companies.

## 7. Triple Bottom Line

The term "Triple Bottom Line" was first coined by John Elkington in 1994. In this regard, Elkington's "3-pillar model" (figure 6) focuses on assessing social, ecological, and economic aspects of companies (Elkington, 1997; Elkington, 1998). The concept implementation presents a challenge for companies trying to integrate the safety of people and the planet into their strategic business model (Loviscek, 2021). The role of long-term partnerships is fundamental in developing a sustainability agenda, triple bottom line strategies, and making the transition to sustainability success (Elkington, 1998). The company's goal should be to achieve a better performance between society, environment, and economy (Kafi et al., 2017).



**Figure 6:** The three elements of the Triple Bottom Line



Source: own representation

Triple bottom line is a tool to measure organizational performance. It views organizational performance from a holistic perspective. It does not only consider stakeholders with whom the company maintains direct transactional relationships, but also local communities. To make a statement about the company's environmental performance, one has to look at the number of resources it uses for its operations. The company shall use its resources to assess environmental performance, such as waste, air emissions, chemical residues, and many more (Hubbard, 2009). Social performances refer to the impact a company and its suppliers have on its communities. It is about concrete goals that the company sets for itself and a numerical assessment of its social and ecological aspects, as figure 7 shows.

	This year	Target
<i>Economic</i>		
Sales growth	5.3%	5.0%
Profit growth	5.8%	5.2%
Return on equity	13.6%	15.0%
Return on assets	3.0%	3.5%
Gearing	55%	55%
<i>Social</i>		
Lost time injury frequency	3.8	5.5
Reliability of supply (1–10 scale)	8.7	8.5
Responsiveness (1–10 scale)	7.5	7.8
Overall customer satisfaction (1–10 scale)	8.1	8.5
Sponsorship	\$0.4m	\$0.3m
Education	20 classes	20 classes
<i>Environment</i>		
EMS plants certified	19	17
Spillages	109	68
Nitrogen discharge	1500 tonnes	1400 tonnes
Suspended solids discharge	2100 tonnes	1700 tonnes
Wastewater reuse	19.7%	20.0%

**Figure 7:** A Triple Bottom Line Performance Measurement System

Source: Hubbard (2009)

## 8. Sustainability efforts of the fashion industry

This section discusses the sustainable efforts of 40 fashion brands, of which 20 of them are fast fashion companies and the other 20 are slow fashion companies. One of the indicators that this study focused on was whether or not the company mentioned its supply chain sustainability in the public sphere, such as its official website. The study employed the triple bottom line theory to assess the performance of each company.

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## 8.1. Fast Fashion companies

Twenty fast fashion companies were investigated for their approach toward sustainability. This study thoroughly examined their websites and other platforms.

### 8.1.1. Zara

Zara is among the most well-known fast fashion brands. Every year, its designers come up with 12,000 new ideas. Zara boosted its use of sustainable sources (organic, Better Cotton Initiative, and recyclable) by 91% in 2020. The Join Life Environmental performance criteria classified more than 35% of its goods as "good". By 2022, Join Life will produce more than half of Zara's clothing. Zara has increased its use of recyclable materials by 91% in the previous exercise. In 2023, 100 % of its cotton will become greener, while cellulosic fibers, linen, and polyester will be self-sustaining or recyclable by 2025 (Sustainable Materials-Inditex.Com, n.d.). The objective is to cut carbon emissions from its supply chain, although there hasn't been any such evidence ("How Ethical Is Zara?" 2022). The Inditex Group, Zara's parent company, claimed in its 2021 sustainability report that **it had incorporated sustainability plans into every link in the supply chain**, including design and sourcing, manufacturing, quality control, logistics, and online and in-store sales (Our Commitment to Sustainability – Inditex.Com, 2021). The occupational health and safety policy introduced by Inditex should also increase productivity. When it comes to social performance, the group launched the for-and-from integration program for people with disabilities which recycles the group's financial profits (Inditex Group Annual Report, 2020).

### 8.1.2. Stradivarius

Stradivarius is a well-known Spanish female fashion label operated by Inditex, one of the largest fashion conglomerates with eight fashion brands. In this regard, Inditex solely focuses on sustainability as a parent business of those brands. The company produces only a few eco-friendly items. There is no evidence that it has reduced greenhouse emissions, as there is no proof of a reduction in textile waste (Stradivarius-Sustainability Rating-Good On You, n.d.). Each of its products comes with an eco-friendly package made of recyclable materials. Its goal is **to cut emissions from its activities and supply chain**.

### 8.1.3. Hennes and Mauritz (H&M)

H&M is the country's second-largest clothing retailer with 3,500 stores nationwide. Its long-term goal is to create a **supply system that is fossil-fuel free**. It has lately formed relationships with sustainable energy companies to meet its goal of sourcing 100% clean electricity for its activities by 2030. The CEO and Director at WWF International urged businesses to step up their efforts and governments to implement critical legislation to combat climate change as well as the depletion of natural habitats. Evolving into a circular firm is an integral step in becoming environmentally positive. A company that optimizes efficiency while reducing waste by developing and creating clothes using materials that are as much as feasible before being repurposed or recycled. The packaging plan of the fashion industry aims to cut package materials by 25% from 2018 to 2025 (H&M Group Committed to Taking Action on Climate beyond COP26, 2021). It has a strategy to stop the destruction of historic and vulnerable forests

and employ renewable energy in part of its supply chain. In this regard, H&M has improved its labor policies in recent years (How Ethical Is H&M, 2022).

#### 8.1.4. Uniqlo

Uniqlo is a Japanese fast fashion retailer brand. Uniqlo is on the right track to long-term success. As a multinational clothing company, UNIQLO is dedicated to creating a sustainable world. It contributes to social sustainability by concentrating on techniques that involve the use of recycled materials. So, individuals can embrace and ensure sustainable practices in various ways, including by giving ecologically friendly reusable bags, supplying clothing care recommendations to help people retain goods longer, and supplying apparel that reduces carbon footprints. It has developed a worldwide collaboration with the UNHCR to combat poverty, aid refugees, and end race prejudice, violence, and territorial disputes. Following the Great East Japan Earthquake in 2011, it gave 3.3 billion yen in relief. It has helped those affected by global disasters, most notably in the aftermath of Hurricane Sandy in the United States in 2012 (TOPUnlocking The Power of Clothing. UNIQLO Sustainability, n.d.). The brand has a strategy to save historic and endangered forests **from being deforested in its supply chain** (Uniqlo-Sustainability Rating-Good On You, n.d.).

#### 8.1.5. Shein

Shein is among the most well-known fast fashion brands amongst Generation Z. Each day, it uploads many new designs to its site. The company has different sections which identify its social responsibility and **transparent supply chain operations**. In addition, Shein mandates its partners to adhere to regional environmental and wastewater regulations as well as mitigate the impacts of its operations on the environment. However, there is no clear evidence of such requirements. Shein does not have any third-party certificates demonstrating that the business is attempting to be ethical or ecologically conscious. Furthermore, Shein's Code of Conduct solely applies to the company's industrial partners, absolving the firm of any liability (Is Shein an Ethical Brand? 2021). As a result, Shein is often accused of being unethical given its **lack of supply chain openness** (Adegeest, 2021).

#### 8.1.6. Mango

Mango is a clothing design and production firm based in Spain. Mango now sources 64% of its cotton from sustainable sources. Another attempt of the company is to increase the usage of recycled polyester. In 2020, 19% of its polyester-composed clothing was created using recyclable materials, a significant improvement over the previous year. Thus, the company is on track to meet its 50% objective by 2025. It established a relationship with LENZING, whose fibers are generated from regulated and ecological timber resources, in 2018 to take the initiative toward regulating the source of its cellulose fibers. Mango nearly doubled the use of cellulose fibers of regulated origin in 2020, accounting for 13% of its clothing. However, the company targets to reach the figure of 100%. To create a more efficient and sustainable transportation network, the company must optimize the packaging of its products. Mango recycles factory-returned cardboard boxes at its warehouses and retailers. It always uses certified paper and cardboard, such as PEFC and FSC, to ensure that it is not contributing to the issue of deforestation and illicit logging. Its goal is to get rid of 160 million plastic poly bags every year (Sustainability for Women 2022 | Mango United Kingdom, n.d.). However, there

<sup>6th</sup> London International Conference, February 24-26, 2022, hosted online by UKEY Consulting and Publishing, London, United Kingdom

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has not been any proof of how the **company's supply chain** decreases greenhouse gas emissions and carbon footprints ("How Ethical Is Mango?" 2021). Nevertheless, the company launched a commitment toward the abolition of child labor, in which it collaborated with the United Nations Global Compact, UNICEF, and the International Labor Organization. This awareness should also apply to the company's entire supply chain system (Alliances and Partners 2022; Mango United Kingdom, n.d.).

#### 8.1.7. Topshop

Topshop is a British fast-fashion brand. The company targets to be carbon neutral by 2025 and reach net-zero carbon pollution throughout the value stream by 2030. Topshop will transition to more circular processes by 2030, ensuring that all ASOS own-brand items and packages are created from more ecological or renewable sources, emphasizing circular design and supporting item rehab programs. By 2030, the company aims to decrease Scope 1 and 2 emissions by 87 % and transportation pollutants by 58 %. By 2025, the company will utilize 100% own-brand packing made of verified recyclable and biodegradable materials. By 2030, customers will be able to examine and engage with information on the sustainability credentials of all ASOS-branded items (Fashion with Integrity, n.d.). **Topshop's supply chain** got accredited by Sedex Members' Ethical Trade Audit, which is a positive sign. In this regard, the company must share information on its regulations, inspections, remedial procedures, and database of suppliers with the public. There is no information about forced labor or gender equality available though ("How Ethical Is Topshop?" 2020).

#### 8.1.8. Pretty Little Things

Pretty Little Things is part of the ultra-fast fashion trend. The company focuses on younger target customers and has grown into becoming a fast fashion empire. It targets to use 100% more eco-friendly polyester and cotton by 2025. To have a holistic view of its operations, the firm **will trace its supply chain** to the source of raw materials for its essential fibers, such as cotton farms. Depending on scientific objectives, Pretty Little Things aims to achieve emission reductions throughout its value chain by 2030, equivalent to a 52 % reduction in emissions compared to its current rate of growth. In addition, the company aims for a 4.2 % reduction in operating pollutants and a 7% reduction in value stream pollutants relative to growth each year (Sustainability | How We Do Our Bit | PrettyLittleThing, n.d.). The company aims to publish a social impact strategy to encourage local communities (Our Business Promise | PrettyLittleThing, n.d.).

#### 8.1.9. Nike

Nike is an American fashion company that sells shoes, clothing, equipment, and accessories. By 2025, it aims to reduce GHG emissions in its owned or operated facilities by 70% using 100% renewable power and vehicle electrification. The company aims to reduce carbon emissions by 65 % and 30 % **across its entire supply chain** by 2030. With improved planning and operational effectiveness, Nike has set the goal of reducing waste by 10% for every unit in production, transportation, offices, and packing, as well as doubling the amount of post-consumer trash collected and reprocessed, thereby creating new cyclical business practices (Nike Purpose, n.d.). The company announced on its homepage that it has made it its mission to

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be a leader in building a diverse, inclusive team and culture (Diversity, Equity, and Inclusion | Nike Purpose, n.d.).

#### 8.1.10. Forever 21

Forever 21 is American clothing, fitness, and accessories retailer that caters to both men and women. Many of its stores offer 100% recyclable plastic or paper bags. To help minimize carbon pollution, the company seeks to ship items by sea rather than air. Most stores also install efficient lighting technologies to reduce energy consumption. At its distribution facility and in stores, Forever 21 has a policy of recycling shipment boxes regularly. Forever 21 is actively working on clothing lines made of eco-friendly materials (Social Responsibility | Forever 21, n.d.). However, the company does not adopt the **labor rights in its supply chains**, although it company condemns all forms of forced or child labor (How Ethical Is Forever 21? ", 2021). Forever 21 requires its suppliers to provide their employees with safe and healthy environments by agreeing to its Social Responsibility Code of Conduct (Social Responsibility | Forever 21, n.d.).

#### 8.1.11. Primark

Primark is a global store that sells the most up-to-date fashion, cosmetics, and homeware at affordable prices. Primark intends to make better sustainable options accessible to everyone. Primark has begun to consider its environmental impact by monitoring carbon dioxide emitted from its activities as well as those of its **supply chain partners**. However, there is no evidence of such a commitment although Primark claims that it focuses on manufacturing products from recycled materials to make its operations sustainable. The company continues to improve its ethical practices concerning workers ("How Ethical Is Primark?" 2021).

#### 8.1.12. Urban Outfitters

Urban Outfitters sells apparel, footwear, cosmetic goods, sportswear, and gear. It collaborates with businesses that prioritize sustainable practices, such as Hydro Flask and Patagonia, to allow consumers to choose more eco-friendly solutions. Its shopping bags are made entirely of recyclable materials. Urban Outfitters also constantly searches for methods to reduce packing waste (UO Community Cares, n.d.). Unfortunately, there is no evidence of the company's eco-friendly initiatives ("How Ethical Is Urban Outfitters?" 2021). Urban Outfitters describes several of its labor standards as its answer to the California Transparency in **Supply Chains Act**, such as its 3rd party auditing methods and pledge not to hire child or slave laborers.

#### 8.1.13. Esprit

Esprit offers a wide variety of apparel and accessories for kids, men, and women. It also sells homeware products. By the end of 2023, it aims to utilize 100% sustainable cotton. Esprit plans to create at least 150,000 clothes with at least 20% recycled post-consumer textile fibers by 2020. It also targeted to raise the level of clothing resold by 40,000 kg. The company has substantially decreased the number of **supply chain partners** in recent years so that it can focus on developing a collaborative community rather than cultivating business connections. It set a goal of reducing greenhouse gas emissions by 23% by 2021. To distribute items to its retail outlets, the company's European Distribution Center brand uses recyclable boxes made of tough plastic. It is indeed possible to save around 790,000 packages each year by eliminating single-

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use packaging. On its homepage, the company states that its sustainability development aims at three elements: economic growth, social inclusion, and environmental protection (Our Strategy | ESPRIT, n.d.).

#### 8.1.14. Missguided

Missguided is a British company that offers clothes to women aged 16 to 35. They also offer a men's line called "Menace." The company has committed to using a few eco-friendly products. It traces a portion of its **supply chain**, including the entire final step of manufacturing. There is no evidence of a reduction in the use of plastic, removal of harmful substances, or a reduction in textile waste in the company's operations though. For example, there is no disclosure as to whether the company pays a living wage or whether there is gender equality or similar social goals. (Missguided-Sustainability Rating-Good On You, n.d.).

#### 8.1.15. Victoria's Secret

Victoria's Secret is a lingerie, apparel, and cosmetics company based in the United States. The company is well-known for its high-profile marketing and branding, which began with a famous catalog. There is no indication that the brand does have a policy in place to reduce the negative effects of microplastics, reduce textile waste in the production of its products, or establish a target for reducing greenhouse gas emissions. There is also no proof that Victoria's Secret pays a livable wage to workers **in its supply chain** (Victoria's Secret-Sustainability Rating-Good On You, n.d.). None of the companies in its supply chain is accredited by labor standards that safeguard worker health and safety, livable wages, and other labor rights. Because of that, the company obtained a score of 21-30% from the Fashion Transparency Index.

#### 8.1.16. Rip Curl

Rip Curl is a significant sporting sponsor and a designer, producer, and marketer of surfing apparel and accessories. The Rip Curl crew is credited with efficiently planting over 50,000 native plants in the region. Plastic bags have been phased out of its network of retail. It has also put solar panels at its head office, storage facility, and Byron Bay retail outlet to cut power and energy consumption. Toitu Envirocare and Rip Curl have collaborated to earn a Carbon Reduction Certification. It has created a new polybag that is comprised of 30% recyclable plastic and has 40% fewer plastic by mass (Environmental Policy, n.d.). However, there is no proof that it reduces textile waste in production or that it pays a livable wage to **workers in its supply chain**. Moreover, no evidence of its commitment to reduce carbon and greenhouse gas emissions could be found as well, although it runs **audits on its supply chain partners** (Rip Curl-Sustainability Rating-Good On You, n.d.).

#### 8.1.17. Guess

Guess is a men's and women's apparel brand and store based in the United States. For the mainstream, it has established a goal of using 100% recycled or bio-based polyester and reducing greenhouse gas emissions by 50% and supply chain emissions by 30% in 2030. Guess targets that 100% of product packaging will be recycled or recyclable by 2025 (GUESS Sustainability, n.d.). There is no proof that it reduces textile waste in its production. Moreover, none of the **companies in its supply chain** is accredited by labor standards that safeguard the safety and health of workers, fair pay, or other labor standards. Such conditions made Guess

score 31-40% in the Fashion Transparency Index (Guess-Sustainability Rating-Good On You, n.d.).

#### 8.1.18. GAP

GAP is a company dedicated to men's, women's, and children's wear. GAP is a trailblazer for water management in its supply chain. It also employs certain environmentally beneficial ingredients, such as recycled materials, although there is little proof that it reduces textile waste during production. While it has established a science-based goal to cut greenhouse gas emissions from its operations, there is very little evidence that justifies its capacity to accomplish that goal (Sustainability, n.d.-a). GAP scored 41-50% in the Inside the Fashion Transparency Index because **none of the business supply chains** is verified by labor standards that safeguard the safety and health of workers, fair wages, or other employee rights. There is also no proof that it pays a livable wage to workers in its supply chain ("How Ethical Is Gap?" 2021). However, the company does release a complete list of suppliers and some data on the second stage of manufacturing to the public.

#### 8.1.19. American Eagle

American Eagle has 1,000 locations globally and is recognized for providing young people with on-trend jeans and casual clothes. Its objectives resonate with the Paris Agreement in which they aim to prevent global warming of 1.5 degrees Celsius. By 2030, it plans to be carbon neutral in all of its activities, including corporate headquarters, distribution centers, shops, and business travel. American Eagle also aims to lower its carbon impact in its supply chain by 40% in 2030 and 60% in 2040. The brand has pledged a 40% reduction in production costs ("Environmental Efforts," n.d.). There is no proof that it reduces textile waste in its production, takes any significant steps to decrease or remove harmful substances, and pays a livable wage to **workers in its supply chain** (American Eagle-Sustainability Rating-Good On You, n.d.). None of the companies in its supply chain is accredited by labor standards as well, causing its score in the 2021 Fashion Transparency Index to range between 11–20%.

#### 8.1.20. Adidas

Adidas is Europe's largest manufacturer of sportswear, clothing, and shoes. In terms of carbon footprint reduction, Adidas met its aim in 2021. It has pledged to cut its own and suppliers' greenhouse emissions by 30% by 2030 and reach climate neutrality by 2050. Adidas will solely employ recycled polyester in every product and usage where a solution exists starting 2024. Its goal for 2020 was to cut water use by 35% per employee. By 2025, the goal is to reduce water use by 40% (Adidas-Environmental Approach, n.d.). The majority of **Adidas' supply chain is tracked and audited**. The company releases the complete list of its network of suppliers in the last stage of manufacturing, some data on the second and first production phases, and some information regarding supplier audit results, forced labor, gender equality, and free association. Adidas also shares thorough information about its supplier regulations, audits, and remedial processes ("How Ethical Is Adidas?" 2020).

### 8.2. Slow fashion companies

Twenty slow fashion companies were investigated for their approach toward sustainability. This study thoroughly examined their websites and other platforms.

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### 8.2.1. Patagonia

Patagonia is American outdoor clothing, swimwear, and activewear retailer for adults and children. Patagonia is taking significant steps to reduce its carbon emissions. Patagonia has also performed studies on the impact of microplastics in collaboration with industry organizations. To lessen its climate effect, the brand has adopted greenhouse gas emission reduction measures **throughout its supply chain**. The brand also provides a complete list of suppliers in the final stages of manufacturing, as well as some details concerning supplier audit reports, slave labor, non-discrimination, and free association. The slow-fashion company provides some information about forced labor or gender equality ("How Ethical Is Patagonia?" 2022).

### 8.2.2. Pact

Pact sells adult and children's underwear, activewear, bedding, and bath products. Pact employs 100 % post-consumer recycled paperboard for paper envelopes and 98 % post-consumer recyclable materials for cardboard boxes, all of which are 100 % recyclable. Furthermore, the interior plastic bag that keeps garments secure is composed of biodegradable plastic. Pact's goods do not include any hazardous colors or ingredients (Pact®|Doing the Right Things., n.d.). Furthermore, Pact is a Fair Trade USA member. It does not appear to have a code of conduct, but it does have a written declaration outlining employees' rights. It sources its last stage of manufacture from nations with a high risk of labor abuse. It **tracks the majority of its supply chain**, covering all stages of production. In most parts of its supply chain, Pact guarantees that workers are paid a livable wage (PACT-Sustainability Rating-Good On You, n.d.).

### 8.2.3. Kotn

Kotn is a Canadian design apparel company that sells adult essentials, loungewear, accessories, and home products. Kotn dedicates itself to providing decent working conditions by assessing its partners regularly to maintain the finest industrial facilities. The company uses sustainable textiles in more than half of its portfolio ("Kotn-Sustainability Score," n.d.). There is no proof that it reduces textile waste although Kotn uses recyclable packaging. Its goal is to enhance the socioeconomic conditions of Egypt's cotton settlements. It keeps track of **every stage of its supply chain**. It is unclear if Kotn pays a livable wage to workers in its supply chain (Kotn-Sustainability Rating-Good On You, n.d.).

### 8.2.4. Sézane

Sézane is a Paris-based fashion label that sells adult clothes, jeans, purses, accessories, and shoes. Sézane's products are made of eco-friendly components. Since the start of its recycling program, the company has recycled over 13,000 items. All of its shipping boxes are now made of recycled cardboard or sourced from sustainable forests. Sézane uses renewable energy to power all of its outlets. It has decreased its carbon footprint by 22% in only one year. By 2022, 86% of Sézane's materials will be eco-friendly. In this regard, Sézane hires independent specialists to evaluate all of its ateliers to guarantee that the code of conduct and the criteria it has set are followed. The company also **audits a portion of its supply chain**, including the final stage of production. Sézane also provides good working conditions for its workers (Our Sustainable Commitments, n.d.).



#### 8.2.5. Quince

Quince is a fashion company based in California that sells adult clothes, home products, and capsule collections. When feasible, it employs materials made in a sustainable manner, such as organic cotton towels and the organic linen collection. It works with factories that are committed to ethical and sustainable practices, including paying people fairly and doing everything possible to be eco-friendly. Quince ships products directly from the production facility to the customer, lowering the carbon impact of sending products to their final destination. The company is removing all virgin plastic from its packaging. By the end of the year, all of its packaging will be 100 percent biodegradable. It uses the least amount of packing possible while still keeping every purchase secure since less packaging means less waste (Sustainability | Quince, n.d.). However, there is no proof that Quince pays a livable wage to **workers in its supply chain**. It also does not appear to lower carbon and other greenhouse gas emissions. The company **traces a portion of its supply chain**, including the final stage of production (Quince-Sustainability Rating-Good On You, n.d.).

#### 8.2.6. A.BCH

A.BCH is an Australian fashion retailer that sells adult clothing, jeans, handbags, and accessories. It uses eco-friendly fabrics such as organic linen and Tencel. To reduce its carbon emissions, it produces domestically. It is responsible for treating wastewater and disposal **throughout its supply chain**. A.BCH has minimized the use of chemicals and water by using sustainable substitutes. Ethical Clothing Australia has certified the company's manufacturing facilities. It tracks the majority of its supply chain, covering all stages of production. It pays regular visits to its suppliers. A.BCH clothes are made of repurposed wool and biodegradable in 99.6% of cases. The company collaborates with carbon-neutral mills to obtain the lowest carbon emissions in production. The company tries to only work with suppliers that have carbon-neutral factories and are committed to providing ethical treatment, fair wages, and working conditions to their workers (A.BCH | Circular Fashion Label | FAQs, n.d.).

#### 8.2.7. Asket

Asket offers adult clothes, jeans, swimwear, and accessories. Organic cotton is one of the eco-friendly fabrics that Asket uses. The company also reduces the amount of packing. To limit its environmental effects, the company manufactures things by hand. In the majority of its goods, it employs low-impact, non-toxic colors. It does not appear to have a code of ethics, but it does have a written declaration outlining workers' rights. In much **of its supply chain**, Asket guarantees that workers are paid a livable wage. It can **track the majority of its supply chain**. The company's representative regularly visits its suppliers (ASKET-Sustainability Rating-Good On You, n.d.).

#### 8.2.8. Unrecorded

Unrecorded is a Netherland-based fashion brand that offers a wide range of organic adult clothing, jeans, swimwear, and accessories. It uses a moderate amount of eco-friendly materials, such as GOTS (Global Organic Textile Standard) cotton. To reduce its carbon emissions, Unrecorded produces locally. There is no proof that it reduces packing. By using sustainable substitutes, Unrecorded has minimized its use of chemicals and water. It does not appear to

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have a code of conduct, but it does have a written declaration outlining workers' rights. It can track the majority of its supply chain. It pays regular visits to its suppliers. It is unclear though if Unrecorded pays a livable wage to **workers in its supply chain** (Sustainability, n.d.-b).

#### 8.2.9. Elle Evans

Elle Evans designs swimwear and activewear that is both attractive and ecological. It makes extensive use of eco-friendly components, especially recyclable materials. To reduce textile waste and carbon emissions, Elle Evans produces domestically and reuses 100% of its offcuts. The company has minimized the use of chemicals and water by using sustainable substitutes. Its last stage of production is in Australia, which has a minimal risk of labor abuse. It keeps **track of every stage of its supply chain**. It is unclear if it pays a livable wage to **workers in its supply chain**, but the company makes frequent visits to its suppliers (Sustainability, n.d.-c).

#### 8.2.10. LANIUS

LANIUS is a German fashion label that sells women's clothing, jeans, loungewear, and accessories. It uses materials with a regulated biological basis that are ecologically benign and safe for animals and the environment. Organic fertilizers and feed are used in organic farming and animal husbandry, which utilize significantly less energy than hazardous chemical fertilizers and pesticides and hence produce less CO<sub>2</sub>. Every year, it creates and produces two collections. If at all feasible, its recyclable cardboard boxes are reused many times. LANIUS also uses green power, recyclable paper, and filtered tap water in its headquarters. Sixty-eight percent of its manufacturing partners now use renewable energy sources. LANIUS is happy to be a GOTS-accredited company, implying that it can assure ethical and socially responsible practices at every stage of the garment-making process. High-level maintenance is ensured by **long-term and close connections with suppliers** (Klimaneutral, n.d.).

#### 8.2.11. Dressarte Paris

Dressarte Paris is a fashion brand that provides custom-made bridal and casual wear. It makes extensive use of eco-friendly resources, including deadstock. To reduce textile waste, Dressarte Paris adopts the pre-order production method. Dressarte Paris has minimized the use of chemicals and water by using sustainable substitutes. A small team of employees manufactures the company's items in-house. It can **track the majority of its supply chain**. It is uncertain if the company ensures that a livable wage is paid to its workers though (Sustainable Custom Wardrobe Design, n.d.).

#### 8.2.12. OhSevenDays

OhSevenDays offers clothes and accessories for women. It makes extensive use of sustainable materials, particularly upcycled textiles. OhSevenDays has minimized the use of chemicals and water by using sustainable substitutes. Almost every stage of the **brand's supply chain** system is tracked. There is no proof that OhSevenDays pays a livable wage to **workers in its supply chain** (About Us, n.d.).

#### 8.2.13. The R Collective

R Collective offers women's clothes, coats, jumpsuits, jeans, and accessories. It extensively uses eco-friendly components, especially recyclable materials. The brand also uses

biodegradable packaging. R Collective has minimized the use of chemicals and water by using sustainable substitutes. It has rescued 82,000 yards of fabric and reduced 52,000 kg of carbon emissions. The R Collective keeps track of **every stage of its supply chain**. The company makes sure that its workers get decent payment at the end of the industrial process. It also makes regular visits to its suppliers (Sustainability, n.d.-d).

#### 8.2.14. TWOTHIRDS

TWOTHIRDS is a fashion company headquartered in Spain that sells adult clothing, lingerie, sportswear, undergarments, and footwear. It uses a medium amount of eco-friendly resources and recycled components. To reduce textile waste and carbon emissions, TWOTHIRDS adopts the pre-order production approach and produces regionally. TWOTHIRDS has minimized the use of chemicals and water by using sustainable substitutes. Its last stage of manufacturing takes place in the European Union, a location with minimal risk of labor exploitation. It is uncertain if the company ensures that a livable wage is paid at the end of the industrial process. TWOTHIRDS can track the majority **of its supply chain**. It makes regular visits to its suppliers (Eco, n.d.).

#### 8.2.15. Little Emperor

Little Emperor is an Australian brand that offers one-of-a-kind, utilitarian, long-lasting children's clothes. Little Emperor uses sustainable materials in almost all of its manufacturing processes. To reduce textile waste, it reuses the majority of its offcuts. Its packaging does not involve any plastic at all. By using sustainable substitutes, Little Emperor has minimized the use of chemicals and water. It does not appear to have a code of conduct, but it does have a written declaration outlining workers' rights. It can track the majority **of its supply chain**. However, there is no evidence that Little Emperor pays good wages to its employees (People + Planet, n.d.).

#### 8.2.16. Svala

Svala is a fashion shop based in Los Angeles specializing in luxury vegan bags, wallets, handbags, and totes. It uses a moderate amount of eco-friendly resources, including recycled components. To reduce its carbon emissions, it produces domestically. There is no proof that it reduces packing. Svala has minimized the use of chemicals and water by using sustainable substitutes. Its last stage of production takes place in the United States, a country with a moderate risk of labor abuse. Svala tracks only some of its activities **regarding the supply chain**. It pays frequent visits to its suppliers (Our Values, n.d.).

#### 8.2.17. Éclipse

Éclipse is a fashion brand that offers adult clothes, cover-ups, and accessories. It also sells clothes for kids. To reduce its carbon emissions, it produces regionally. It does not use of sustainable materials. It comes in biodegradable packaging. Éclipse uses recycled fabric. Its last step of manufacturing takes place in the United States, a nation with a medium risk of labor abuse. The company does not appear to have a code of conduct, but it does have a written declaration outlining workers' rights. It guarantees that a decent wage is paid at the end of the industrial process to its workers. Éclipse tracks most of its **supply chain activities** (What Makes Éclipse Apparel Sustainable? n.d.).

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#### 8.2.18. **Pure Pod**

Pure Pod is an Australian clothing brand that offers clothes and sustainable workwear for women. It uses a moderate amount of sustainable and environmentally friendly materials, such as GOTS (Global Organic Textile Standard) cotton. It uses non-toxic colors for its products. Its use of eco-friendly materials decreases its environmental effect and reduces the quantity of water utilized in manufacturing. Pure Pod keeps track of health and safety risks by paying visits to all of its final-stage vendors. In **many parts of its supply chain**, Pure Pod guarantees that workers are paid a livable wage. It keeps track of **every step of its supply chain**. It pays regular visits to its suppliers (Pure Pod-Sustainability Rating-Good On You, n.d.).

#### 8.2.19. **Bozena Jankowska**

Bozena Jankowska is a London-based fashion label that specializes in women's clothing. It uses a moderate amount of environmentally sustainable resources, using recycled components. To reduce its carbon emissions, it produces domestically. Bozena Jankowska reduces the number of chemicals, water, and wastewater utilized in the manufacturing process. The company does not seem to have a code of ethics, but it does have a written declaration outlining employees' rights. The brand **tracks most of its supply chain**. It pays frequent visits to its suppliers (What Does Sustainability Mean to Us? n.d.).

#### 8.2.20. **Unspun**

Unspun is an adult denim jeans and shorts company based in the United States. To reduce textile waste, Unspun adopts the pre-order production approach. It conducts strategies to minimize manufacturing-related greenhouse gas emissions. In the majority of its goods, it employs low-impact, non-toxic colors. It has incorporated water conservation measures across its supply chain. It does not appear to have a code of conduct, but it does have a written declaration outlining workers' rights. It is working on a scheme to raise salaries in a portion of its supply chain. It can **track the majority of its supply chain**. Unspun also pays regular visits to its suppliers (Sustainability // Unspun Custom Jeans, n.d.).

### 8.3. **Discussion**

This article deals with slow and fast fashion companies and their supply chains. The study was derived from the thought that fast fashion companies and their supply chains are very admirable from an economic point of view due to their short lead times. This study clarified several questions, including what the characteristics of slow and fast fashion supply chains are or whether or not the slow and fast fashion supply chains can adopt the same strategy. The theoretical argumentation shows that a fast-fashion business strategy differs from the one adopted by slow-fashion companies. Figures 8 and 9 provide an overview of the important social and environmental aspects of the investigated 20 slow and 20 fast fashion companies.

	Social	Environmental
ZARA	Occupational Health and Safety policy Integration program for people with disabilities	Some of Zara's clothes carry the environmental label "join life"
Stradivarius	Occupational Health and Safety policy Integration program for people with disabilities	Aims to reduce the carbon footprint of its supply chain
H&M	Tries to improve labor policies	Aims to have a fossil-fuel free supply chain
UNIQLO	Is committed to fighting poverty, refugees, fighting violence	Offers clothing with a low carbon footprint
SHEIN	Writes about its social responsibility	Requires its partners to follow regional environmental and wastewater regulations
Mango	Is committed to fight against child-labor	Tries to use environmental-friendly cotton.
TOPSHOP	Limited information provision about forced labor or gender equality	Aims to use recyclable packaging
Pretty Little Things	Wants to publish a social impact strategy	Aims to accomplish emission reductions throughout its value stream
Nike	Aims to be a leader in building a diverse, inclusive team and culture	Aims to use 100% renewable power and vehicle electrification
Forever 21	Social Responsibility Code of Conduct, which suppliers must agree to	Will ship items by sea rather than by air
Primark	Is continuing to improve its ethical practices in relation to workers	Is monitoring carbon dioxide emissions
Urban Outfitters	Promises not to use child or slave labor	Uses shopping bags entirely made of recyclable materials
Espirit	Social inclusion is part of its sustainability strategy	Is eliminating single-use packaging
Missguided	Does not disclose social goals	Makes use of environmentally friendly products
Victoria's Secret	Rather a negative example. None of the companies in its supply chain are accredited by labor standards	There seems to be no policy to achieve environmental goals
Rip Curl	It is not certain if the company pays workers in its supply chain a fair wage.	Eliminated plastic bags in its retail network
Guess	No evidence of laboratory standards found	Aims to reduce greenhouse gas and supply chain emissions
GAP	There is no evidence that its supply chains are verified by labor standards	Good water management in its supply chain
American Eagle	Companies in its supply chain are not accredited by labor standards	Its objectives are in accordance with the Paris Climate Agreement
Adidas	Releases information regarding supplier audit results, forced labor, gender equality	Tries to reach climate neutrality

**Figure 8:** Important aspects of fast fashion companies

Source: own representation

	Social	Environmental
Patagonia	Provides some information about forced labor or gender equality	Has implemented greenhouse gas emission reduction measures throughout its supply chain
Pact	Written statement outlining employees' rights	Does not use any hazardous colors or ingredients
Kotn	Is committed to decent working conditions	Uses recyclable packaging
Sézane	Working conditions are part of the sustainability strategy	Its shipping boxes are made of recycled cardboard
Quince	Is committed to pay fair wages	Has Organic Cotton Towels and Organic Linen Collection
A.BCH	Works with suppliers that attach importance to ethical treatment, fair wages and working conditions of workers	Makes extensive use of environmentally friendly fabrics such as organic linen and Tencel
Asket	In most of its supply chains, it guarantees that workers are paid a livable wage.	Company manufactures things by hand.
Unrecorded	Has a written declaration outlining workers' rights	It produces locally
Elle Evans	It is not clear if it pays its workers livable wages.	It reuses its offcuts
LANIUS	Ensures socially responsible practices at every stage of the garment-making process.	Uses organic fertilizers and feed
Dressarte Paris	It is not clear if it pays its workers livable wages.	Garments are created to order, to reduce waste
OhSevenDays	It is not clear if it pays its workers livable wages.	Uses upcycled textiles
The R Collective	Ensures a suitable living wage	Uses recyclable material
TWOTHIRDS	Part of manufacturing takes place in the European Union (minimal risk of labor exploitation)	Is producing locally
Little Emperor	It has a written declaration outlining workers' rights	Uses sustainable materials in most of its manufacturing process.
Svala	Part of manufacturing takes place in the United States (minimal risk of labor exploitation)	Produces domestically
éclipse	Part of manufacturing takes place in the United States (minimal risk of labor exploitation)	Uses recycled fabric
Pure Pod	It guarantees that workers are paid a livable wage	It uses non-toxic colors for its products
Bozena Jankowska	Has a written declaration outlining employees' rights	It reduces the quantity of chemicals, water, and wastewater utilized in the manufacturing process
Unspun	It has a written declaration outlining workers' rights	It uses low-impact, non-toxic colours

**Figure 9:** Important aspects of slow fashion companies

Source: own representation

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## 9. Conclusion

The findings presented in the previous section imply that the awareness of fashion companies toward the environment is not affected by their business model. It was found that some fast fashion companies are not as ignorant of their responsibility toward the environment and that some slow fashion companies are not as eco-friendly as many people think they are. The indicators used in the study included how frequently companies visit their supply chain companies, whether or not those companies give decent wages to their employees, and whether or not there is proof of sustainable practices performed by companies. While this study provides an in-depth perspective on how the forty fashion companies presented in it approach eco-friendliness and sustainability in their practices, it does not provide any possibility to generalize the findings since they are tailor-made for the scenario this study focuses on. Therefore, future researchers may want to conduct extensive studies on whether or not there is any pattern in how fashion companies approach environmental manufacturing practices.

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## The effect of social media on family relationships

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### Abstract

The aim of this study is to examine the effect of social media and internet use on family communication. In this context, social media, and internet usage situations (purpose, frequency, duration) were examined. Then, the effects of sharing, social media addiction, social isolation, and spending quality time together on family communication were examined.

The causal screening method was used in the research. The research was carried out on 207 people by snowball sampling method. The measurement tool developed by Demir (2016) was used in the research. The data collection tool was created and applied as an online form. Parametric tests were used in the analysis of the data.

As a result of the analysis of the data; it has been determined that the participants frequently use the internet and social networks, they use their own names in social media, and the most used social network is Facebook. In the study, the sub-dimension of sharing at the level of family communication was “low”; social media addiction dimension is “high”; It was found that the social isolation dimension was “moderate”, the quality of spending time with common sub-dimension was at a medium level, and in general, the intra-communication was at a moderate level.

Women are more dependent on social media than men; It has been found that those who spend less time in social networks have higher levels of spending quality time together within the family. As a result, it can be said that the use of social networks and the internet is high and negatively affects family communication.

**Key words:** social media, family communication, social media addition, internet effects, negative interaction within the family

## **The Impact of Non-performing Loans on Nigerian Economic Growth, 2011-2020**

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### **Abstract**

This paper examined the impact of rising non-performing loans (NPL) on Nigeria's economic growth using time series data from 2011 – to 2020. In analyzing this relationship, the co-integrated autoregressive distributed lag (ARDL) model was employed, and the study revealed a long-run negative relationship between NPL and economic growth. This suggests that a higher NPL may have reduced the banks' loan disbursement capacity or made the banks reluctant to give out more loans to the productive sector, adversely affecting the economy. This research also supports the long-standing results of a positive relationship between money supply and economic growth. It further revealed a positive relationship between government expenditure and economic growth in Nigeria. Therefore, the study recommended that Nigeria's financial management team activities include a dedicated watch on the rising NPL in the banking industry. Furthermore, monitoring NPL should no longer be viewed as the sole responsibility of the CBN but that of all managers of the Nigerian economy.

**Key words:** Non-performing loan, economic growth, bank's credit to the private sector, money supply, government expenditure.

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## 1. Introduction

The discussion on Non-Performing Loans (NPL) is an essential topic among economic policymakers and researchers in recent years due to its critical nature in determining the health of banks, its impact on the financial system and ultimately, it is an attendant systemic risk on the economy as a whole. An unhealthy financial system undermines economic growth due to NPLs and insufficient capital, while a healthy financial system could enhance economic growth (Hondroyannis et al., 2005). Furthermore, developing countries feel the impact of the financial sector performance more than developed countries (Bakar and Sulong, 2018).

Recent studies suggest that the growth of NPLs requires an increase in capital requirements since NPLs would have reduced the capacity of banks to finance new loans (Zeng, (2012), as there is an inverse relationship between NPLs level and economic growth (Morakinyo and Sibandab (2016); Jimenez and Saurina 2005; Pesaran et al. 2006; Quagliariello 2007; Klein 2013). NPLs are thus a recurring feature of economic and banking crises (European Central Bank, 2013).

Over time, there has been a debatable consensus that as the ratio of NPLs increases, there is an increased risk that a bank will fail. Depending on the size of the bank or its linkage with the economy, the impact may be significant on the economy. Conversely, the performance of the banking industry, in general, has been found to impact the performance of the economy significantly. However, scholars differ in their submissions on the level and direction of this impact.

Since the 2008 global financial crisis that led to the collapse of central banks globally, scholars have given more attention to the impact of bad loans on the health of commercial banks and the economy at large. As the levels of NPLs have risen significantly, negatively affecting the liquidity and profitability of credit institutions and, by implication, undermining banking system stability (Nikolopoulos and Tsalas, 2017). This is premised on the observed link between the financial system and the economy. Economies whose banking sector boomed hitherto witnessed a sudden halt in their credit growth due to the financial crisis of 2008 (IMF, 2012).

In Nigeria, the global financial meltdown of 2008 negatively affected most banks' NPL ratio, which led to the formation of the Asset Management Corporation of Nigeria (AMCON) to free the banking industry of the high rate of Non-performing loans. The Corporation was set up to stabilize and re-vitalize the Nigerian economy. It is pertinent to note that the debt crisis due to large NPLs as a percentage of industry loans was 32.8% as of the end of 2009. Towards achieving this vision, the Corporation set out to positively affect the Nigerian economy by recapitalizing banks affected by the credit burden, buying off NPLs from the banks, and injecting some form of liquidity into them to return to their lending capabilities. From the preceding, it is evident that the Nigerian economic policy stakeholders identified the importance of the effective handling of NPLs vis-à-vis the economy. If the situation is left to escalate, it may portend grave danger for the financial systems' stability and the economy in general.

Based on this insight, the main objective of this study is to investigate the reaction of the Nigerian economy to the changes in the ratio of NPLs.

The present paper is organized as follows. The following section provides a literature review within the theoretical and empirical research studies on the relationship between non-performing loans and economic growth. Section 2 presents a general overview of the methodology and the obtained data. Section 3 gives the results of the study case. Finally, the paper ends with the conclusions in Section 4.

## **2. Literature review**

### **2.1. Theoretical review**

Internationally, nonperforming loans are considered loans (and other assets) which should be classified as NPL when (1) payments of principal and interest are past due by three months (90 days) or more, or (2) interest payments equal to three months (90 days) interest or more have been capitalised (re-invested into the principal amount), refinanced, or rolled over (i.e. payment has been delayed by arrangement). (IMF, 2006, p. 46). In this line, International Accounting Standards (IASs) prefer to refer to such loans as impaired loans (Baudino, P., Orlandi, J., & Zamil, R. (2018).

Nor and Bahri (2017) explored that capital allocation might be distorted in an economy because of issues in lending as it diminishes the bank's available capital and thus affects the bank's capability to create more loans to the economy within the line of an inverse relationship between NPLs and economic growth.

Klein (2013) posits that the NPL level affects the financial stability of an economy through its impact on a banks' financial intermediation role. Likewise, Lata (2014) stated that a clear symptom of economic slowdown is the accumulation of NPLs. This further supports the bi-directional link between NPLs and the economy, which is broadly grouped by Al-Yousif (2002) and Majid (2007) as (a)finance-led growth; (b) growth-led finance; (c)bi-directional; and (d) the independent.

Balgova et al. (2016) revealed that NPLs is driven by macroeconomic conditions factors that are bank-specific. This supports the earlier study of Espinoza and Prasad (2010), which focused on financial institutions in the Gulf region. Their research chronicled how NPLs increase due to lower economic growth and higher interest rates. Some other studies found a significant relationship between asset quality and the economy. The outcomes of the Nkusu (2011) study demonstrated a significant relationship between asset quality and the economy within 26 advanced economies. Klein (2013) further extended this result for some essential parts of Europe, specifically the central, eastern, and south-eastern regions, concluding that the broader macroeconomic situation and bank-specific factors play crucial roles.

Another stream of studies deals with the interlink between finance and economic growth. This was noted in the earlier work of Ndikumana (2001), where it observed that research attention has increased from both academia and policymakers on the role of the financial system on economic growth or domestic output growth. Some economists have noted a one-directional link, where the activities in the financial system directly affect the economy. Still, some have preferred to see a multidirectional link where the financial system influences and is influenced by the economy. Puatwoe and Piabuo (2017) observed in their study of Cameroon's financial



sector development and economic growth that all the financial development indicators reveal a positive impact on economic growth in the long run.

Greenwood and Jovanovic (1990) championed the development of an endogenous growth model that incorporates both financial linkages and economic growth. Morakinyo and Sibanda (2016) theoretically explored the connection between finance and growth within three main links. The first one occurs via the savings boost that stimulates available funds that can be given out as credit, the second one is through the efficient apportionment of savings which allows for positive results from savings and investment, and the third one is through the growth of the marginal social product of capital. This is in line with Cooray's (2009) conclusions, which concluded that the financial sector's size, activity, and efficiency are crucial for economic growth. As a result, expanding the banking system in the countries under study can boost growth by channelling resources to their most productive uses based on available evidence.

On the other hand, Schumpeter (1969), Hou and Dickinson (2007) concluded that NPLs cause resources to be tied down in unproductive sectors of an economy and, as such, will negatively affect economic growth, which will inversely impact the banking system's ability to lend. This will eventually lead to a dearth of credit to the deficit spending units and cause a situation where financial institutions will reduce the flow of credit below the required average level necessary for specific market conditions (Gertler & Kiyotaki, 2010).

Generally, businesses may find it challenging to survive without the availability of loans, and this has an adverse effect on a country's productive capacity. Hou and Dickinson (2007) noted that the changes in NPLs, among other variables, determine the ability of banks to extend credit to the economy. Impavido, Klingen, & Sun (2012). These authors suggest that the level of NPLs adversely impacts economic growth by impeding credit growth. Balgova et al. (2016) findings on how GDP growth, investment growth, etc. are affected by NPLs are in line with the existing literature; thus, it is suggestive that there is a severe economic gain by reducing the burden of NPLs on the economy. The study's outcomes suggest that increases in economic growth and investment growth are highest when economies manage to escape from the burden of NPLs, especially with the existence of conducive external conditions.

## 2.2. Empirical review

Although the literature is rich in terms of empirical studies on the relationship between non-performing loans and economic growth, the debates concerning this issue are still ongoing. The following are some definitive studies about nonperforming loans and economic growth.

Beck, Jakubik and PiloIU (2013) adopted a dynamic panel estimation by using a generalised method of moments (GMM) to prove that the NPL ratio is explained by GDP more than interest rates or share prices for 75 countries.

A high rate of NPL hinders the bank's capacity to grant further credit. Several businesses depend on bank loans to acquire capital projects or even meet their running costs. Leon and Tracey (2011) estimated the Loan-NPL relationship using a threshold model for a sample of Caribbean countries. The study results suggest that the threshold range for the ratio of NPL/Total Loans determines banks' differential loan behaviour. Accordingly, the Non-Performing Loans ratio increases, banks tend to reduce their lending as they become risk-averse. Therefore NPLs can severely compromise the efficiency of the banking sector". There

is further evidence that the rapid increase in NPLs limited the banks' lending capabilities and increased the banks' susceptibility to further shocks. This has broader repercussions for other economic activities proved by employing GMM (Klein, 2013).

Koivu (2002) analyzed the finance-growth nexus using a fixed-effects panel model and unbalanced panel data from 25 transition economies during 1993-2000 and concluded an adverse effect of private credit on the private sector.

Ghali (1999) adopted the Vector autoregression (VAR) to analyze the data on Tunisia (1963-1993), and the results revealed that finance and growth in the country have a strong and positive effect in the long run.

Morakinyo and Sibanda (2016) adopted the endogenous growth model to examine how NPLs and other factors determine economic growth in the long run. The research made use of quarterly data covering the year 1998 to 2014. NPLs was incorporated in a multivariate model by adopting the Auto-regressive Distributive Lag procedure, and the results revealed that NPLs and economic growth have a long-run relationship. The study further found a negative relationship between NPLs and economic growth.

Balgova et al. (2016) collected data on NPL reduction timelines to analyze the burden imposed by NPLs on the economy. They adopted the matching analysis to compare different situations after a rise in NPLs, namely: policy actions to reduce NPL stock, fall in NPL primarily induced by the increase of new credit and cycles of persistent NPLs. The finding revealed that the economy is better off in the medium term by reducing NPLs. This is further bolstered in the work of Balgova et al. (2017), whose research collected NPL data in about 190 countries over a time frame of 27 years. With the use of matching analysis, the result of the study estimated that the reduction in NPL led to extra growth of the economy more than 1.5% per annum over several years.

Nargis et al. (2019) employed multiple regression analysis to analyze the link between NPLs and economic growth using emerging economy data. The research found an insignificant relationship between GDP growth rate and NPLs rate. On the other hand, however, Machacek et al. (2018) earlier conducted a meta-regression analysis and found that real economic growth might significantly influence NPLs. This is in line with the study of Beck et al. (2015), which took macroeconomic sample data across 75 countries and found that NPLs level could be affected by real GDP using the dynamic panel analyses.

### **2.3. Summary of review and gap**

Despite the perceived impact of NPLs on the economy, minimal attention has been given to this direct relationship in scholarly works and research, especially in Nigeria. Morakinyo et al. (2016) confirmed this as they noted that only limited research exists on NPLs as it affects or is affected by economic growth. In their analysis, they used the following variables: NPLs, government expenditure growth rate, gross secondary school enrolment, Bank credit to the economy and the inflation rate in Nigeria to evaluate the determination of economic growth by NPLs and other factors. Perhaps, an inclusion of Money supply and loan interest rate could reveal more causal effects between NPL and economic growth in Nigeria. It should also be noted that some more attention had been given to the impact of NPLs on banks or the role played by the banks and the financial system on the economy but not much has been done on

the direct link between NPLs and the economy in the literature, especially using the data obtainable from Nigeria.

## **2.4. Recent measures against NPLs in Nigeria**

### *Introduction of the bank verification number (BVN)*

The Central Bank of Nigeria introduced a centralized biometric identification system on 14<sup>th</sup> February 2014. With this system, all registered bank account holders were given a unique personal identification number after their enrolment, and this is referred to as the bank verification number (BVN). It was designed to combat illegal banking transactions as one BVN is assigned to a specific individual across all his accounts in all Nigerian Banks. The extension of the capability of this data bank is the ability to trace all credit defaulters across the banking industry, even when such defaulters decide to use different name sets. This has made the tracking of credit defaulters easier in Nigeria.

### *Offer letter clause for credit facilities*

To tackle the growth of NPLs, the Central Bank of Nigeria issued a letter to all Nigerian banks on 26<sup>th</sup> August 2019, allowing the banks to settle the outstanding indebtedness of credit defaulters with any amount standing in credit in any of their accounts across the banking industry in Nigeria. This resolution was reached at the 345<sup>th</sup> Bankers Committee meeting held on 26<sup>th</sup> August 2019. This is to be achieved by inserting some clauses into the terms and conditions in loan contract documents.

### *Amendments of the AMCON Act (2010)*

Nigeria chose to form the Asset Management Corporation of Nigeria (AMCON) in the year 2010 according to the enabling Act setting up the Corporation to free the Nigerian commercial banks of their bad debts and recover these debts in the interest of the Nigerian economy. Since the inception of the Corporation, its enabling Act has been amended twice. The first amendment got the presidential assent on 26<sup>th</sup> May 2016 and the second amendment got the presidential assent on 29<sup>th</sup> Day of July 2019. These amendments were to further strengthen the Corporation in its debt recovery activities. The Corporation has also been authorized to publish the names of recalcitrant debtors in National newspapers in a name and shame arrangement.

### *Redesigned Credit Risk Management System (CRMS)*

Towards promoting a safe financial system by keeping a robust data bank of all loan borrowers in Commercial, Merchant and Non-interest Banks in Nigeria, the CBN introduced the redesigned CRMS in February 2017. This data bank served as a reference point for all the affected banks to confirm the creditworthiness of intending borrowers. The scope of the CRMS was further enlarged in April 2021 by including all Development Finance Institutions, Microfinance banks, Primary mortgage institutions and Finance companies. This has allowed for a robust database for all participants in loan disbursement functions across the Nigerian Banking industry.

### 3. Data and methodology

#### 3.1. Technique of analysis and empirical model

This study will refer to the estimable form of the growth model according to Morakinyo and Sibanda (2016), which is derived as follows:

$$\text{Per capita real GDP Growth rate} = a + b_1btr + b_2NPLS + b_3Infr + b_4grenr2 + b_5gengvconexpgr + e \quad (1)$$

Where:

Per capita, real output growth is expressed as a function of

1. *btr* = Banks credit to the private sector
2. *NPLs* = Nonperforming loans,
3. *Infr* = Inflation rate,
4. *grenr2* = Gross Secondary School Enrollment rate and
5. *gengvconexpgr* = general government expenditure.

To enrich the work, we will be adding two extra variables,  $M_3$  and Interest rate, in the model.  $M_3$  is added following Lucas (1996) where he noted in his Nobel lecture that "This tension between two incompatible ideas - that changes in money are neutral unit changes and that they induce movements in employment and production in the same direction- has been at the center of monetary theory at least since Hume wrote". Also, we include Interest rate following the research of Udoka and Anyigang (2012), who noted that the relationship between interest rate and economic growth in Nigeria is negative. GDP will decrease if the interest rate increases, which will ultimately impede the growth of the real sector.

However, we will be leaving out Gross Secondary School Enrollment rate *grenr2* as it is assumed to be more useful as a human development index used for measuring economic development and not the essential economic growth measurement. Also, we will assume that inflation has been factored into the estimates of the Real GDP. More so, in place of Per capita real GDP growth rate, we will adopt the Real GDP growth rate.

Thus, the model is specified as

$$RGDPgr = a + b_1Btr + b_2NPLs + b_3GXP + b_4M_3 + b_5IntR + e \quad (2)$$

Where:

GDPgr = Real GDP Growth rate

Btr = Bank's credit to the private sector

NPLS = Nonperforming loans

GXP = General government expenditure

$M_3$  =  $M_2$  plus Open Market Operation Bills.

IntR = Real Interest Rate measured using the Maximum lending rate.

e = Stochastic or error term

The model (2) will be estimated using the co-integrated autoregressive distributed lag (ARDL) model. This model will be employed in the study as the equation contains independent variables that can influence the dependent variable. More so, the ARDL model incorporates the lags for both the dependent and independent variables in its estimation. As applicable in other comparable time series regression models, this model expects all the data sets in the study to be stationary though the level relationships can still be estimated even the integrated variables are/are not co-integrated. This is achievable by evaluating the co-integrating properties of the variables employing the Bounds Test Approach developed by Pesaran et al. (2001). The approach is based on the order of integration of the variables. Here, if  $K_t$  is the vector of both dependent and independent variables,  $K_t$  must not be integrated of order  $d > 1$ . This brings to the fore the need to verify the unit root properties of the variables to confirm that this precondition is met. This is achieved using the Augmented Dickey-Fuller (1979) technique to test for unit root.

At its level form, the proposed ARDL model in this study is:

$$RGDPG_t = a_0 + \sum_{i=1}^o a_{1i} RGDPG_{t-i} + \sum_{i=0}^p a_{2i} Btcr_{t-i} + \sum_{i=0}^q a_{3i} NPLs_{t-i} + \sum_{i=0}^r a_{4i} GXP_{t-i} + \sum_{i=0}^x a_{5i} M3_{t-i} + \sum_{i=1}^t a_{6i} IntR_{t-i} + e_t$$

$$RGDPG_t = a_0 + \sum_{i=1}^o a_{1i} RGDPG_{t-i} + \sum_{i=0}^p a_{2i} Btcr_{t-i} + \sum_{i=0}^q a_{3i} NPLs_{t-i} + \sum_{i=0}^r a_{4i} GXP_{t-i} + \sum_{i=0}^x a_{5i} M3_{t-i} + \sum_{i=1}^t a_{6i} IntR_{t-i} + e_t$$

(3)

Where  $a_1$  to  $a_6$  are coefficients of the level relationships,  $o, p, q, r, x$ , and  $t$  are the optimum lag specifications for RGDPG, Btcr, NPLs, GXP, M3, and IntR, respectively, and these are determined using the akaike information criteria (AIC), and  $e_t$  is the error term.

We can express equation 3 in a co-integrating form to capture the short and long-run dynamics in the relationship between RGDPG and the other variables in the equation.

$$\Delta RGDPG_t = \phi_0 + \sum_{i=1}^c \phi_{1i} \Delta RGDPG_{t-i} + \sum_{i=0}^d \phi_{2i} \Delta Btcr_{t-i} + \sum_{i=0}^f \phi_{3i} \Delta NPLs_{t-i} + \sum_{i=0}^g \phi_{4i} \Delta GXP_{t-i} + \sum_{i=0}^h \phi_{5i} \Delta M3_{t-i} + \sum_{i=1}^j \phi_{6i} \Delta IntR_{t-i} + \delta (RGDPG_{t-1} - c - b_1 Btcr_{t-1} - b_2 NPLs_{t-1} - b_3 GXP_{t-1} - b_4 M3_{t-1} - b_5 IntR_{t-1}) + \varepsilon_t$$

$$\Delta RGDPG_t = \phi_0 + \sum_{i=1}^c \phi_{1i} \Delta RGDPG_{t-i} + \sum_{i=0}^d \phi_{2i} \Delta Btcr_{t-i} + \sum_{i=0}^f \phi_{3i} \Delta NPLs_{t-i} + \sum_{i=0}^g \phi_{4i} \Delta GXP_{t-i} + \sum_{i=0}^h \phi_{5i} \Delta M3_{t-i} + \sum_{i=1}^j \phi_{6i} \Delta IntR_{t-i} + \delta (RGDPG_{t-1} - c - b_1 Btcr_{t-1} - b_2 NPLs_{t-1} - b_3 GXP_{t-1} - b_4 M3_{t-1} - b_5 IntR_{t-1}) + \varepsilon_t$$

(4)

In equation 4,  $\Delta$  means difference operator, c,d,f,g,h, and j are the optimum lags for RGDPG, Btcr, NPLs, GXP, M3, and IntR in the short-

run, respectively,  $\phi_{1 to 6}$  represents the short-run coefficients that portray the short-run dynamics in the relationship under investigation, and the coefficients  $b_{1 to 5}$  are the long-run coefficients.  $\varepsilon_t$  is the error term in the co-integrating model, the parameter  $\delta$  represents the speed of adjustment, and it measures the speed that the equilibrium is restored in the long run among the co-integrating variables. The research will conduct the bounds test under the null hypothesis of “no level relationship” using the wald test  $b_1 = b_2 = b_3 = b_4 = b_5 = 0$ .

If the test statistic lies above the upper bound at the selected significance level, the null hypothesis is rejected, but it cannot be rejected if it lies below the lower bound. If it lies between the upper and the lower bound at the selected significance level, the test is said to be inconclusive.

### 3.2. Data and sources

We used quarterly data from 2011 to 2020 to study the impact of non-performing loans on Nigerian economic growth.

The data set included the following variables:

RGDPG (growth rate of the real GDP);

Btcr (growth of total bank's credit to the private sector);

NPLs (growth of NPLs);

GXP (growth of the total government expenditure);

M3 (growth of broad money supply)

IntR (interest rate measured using the maximum lending rate by commercial banks).

The data statistics were taken from Central Bank of Nigeria (CBN) reports.

The above-mentioned variables were adopted to reflect the significant influencers of non-performing loans in Nigeria. For instance, the credit to the private sector reveals the total loans disbursed by banks to the private sector and a portion of it that has remained unpaid or whose repayment terms have not been met will give rise to the non-performing loans figure. On the other hand, Government Expenditure plays a significant role in loan repayment as experiences in the Asset Management Corporation of Nigeria revealed that many loans depend on the repayment by the government on contracts executed on the government's behalf. The Nigerian government is the highest employer of labour in Nigeria. As such, individual borrowers who are not body corporates depend on salaries received from the government (which form a portion of the recurrent expenditure) to service their loan repayments. This follows the research conducted by Dash and Kabra (2010), which concluded that real income variation and NPL have a negative relationship, but interest rates, NPLs and the real effective exchange rate have a positive relationship.

Similarly, the role of money and interest rates in economic growth has been well documented in earlier researches and how it is available or otherwise directly impact loan repayment capability by borrowers as revealed in the works of Badar and Javid (2013), which showed a bivariate cointegration between NPLs, money supply and interest rates. This followed the work of Sinkey and Greenwalt (1991) and Solarin, Sulaiman and Jauhari (2011), which concluded that there is a positive relationship between interest rate, excessive lending and NPL.

The Btcr, NPL, GXP, M3 and IntR. Data were obtained from the statistics department of the Central Bank of Nigeria, while the GDP data was sourced from the database of the National Bureau of Statistics (NBS).

### 3.3. *Apriori* expectations

The Real GDP growth rate is used in this study as it is the most common measure for economic growth. The model used the total bank's credit to the private sector, too, as it forms the basis on which NPLs may occur. Abubakar et al. (2015) noted that private and bank credits stimulate growth in the ECOWAS region through human capital accumulation. Thus, we assume that total bank's credit to the private sector and economic growth have a positive relationship.

Furthermore, without bank credit, there will be no bad loan. Nonperforming loans are central to this research work, and as such, it was considered vis-à-vis the percentage of gross loans. Khemraj and Pasha (2009) studied how NPLs responded to macroeconomic and bank-specific factors in Guyana using regression analysis and concluded that GDP growth is negatively related NPLs. Similarly, Espinoza and Prasad (2010) research corroborated the earlier conclusion that the rise in interest rates coupled with a fall in non-oil economic growth increased the NPL ratio of banks. Thus, in this research, we assume a negative relationship between NPL and economic growth while we also assume the same for the relationship between Interest rate and economic growth, as shown in the work of Udoka and Anyingang (2012). Considering the role money plays in the economy and several established works in literature, we will assume a positive relationship between money supply and economic growth.

The relationship between government spending and economic growth has shown varied conclusions in economic literature. Diamond and Heller (1989), using the Denison growth accounting approach, concluded that social spending might have a substantial impact on growth in the short run, but infrastructure spending may have little impact. While current spending for directly productive reasons may have a favourable impact, capital expenditure appears to impact these industries negatively. Wu. Et al. (2010) submitted that except for low-income countries, government spending is advantageous to economic growth regardless of how government size and economic growth are assessed. The results confirm the bi-directional causality between government activities and economic growth for various subsamples of nations when the countries are disaggregated by income levels and the degree of corruption. Also, in a similar work conducted in Nigeria by Nurudeen and Usman (2010), they noted a negative relationship between government total expenditure and economic growth. Thus, we will assume either a positive or a negative relationship between government expenditure and economic growth.

Based on the priori expectations, while Btcr and  $M_3$  are expected to impact real GDP growth positively, NPL and IntR are expected to impact real GDP growth negatively. However, the impact of GXP on RGDPG is indeterminate, as it may be positive or negative.

So, hypothesis of the study is the following:

$H_0$ : There is no significant negative relationship between NPLs and Real GDP Growth rate at the 5% significance level.

## 4. Results and interpretations

### 4.1. Unit root test

Table 1 below presents the results of the unit root tests. The variables were integrated of mixed orders,  $i_0$  and  $i_1$ ; thus, the rationale for employing the ARDL is the best estimation technique for the model.

At a 5 per cent level of significance, using the Augmented Dicken Fuller Test, Btcr, NPLs, GXP and  $M_3$  are stationary at level, IntR and RGDPG are non-stationary integrated of order  $d = 1$ . In this case, the null hypothesis of the unit root cannot be outrightly rejected for IntR and RGDPG at 5 per cent level of significance since the variables are first difference stationary. Conversely, Btcr, NPLs, GXP and  $M_3$  are all stationary at a level under the test.

Thus, we may conclude that all the variables are integrated of order  $d < 2$ , supporting their suitability for inclusion in the ARDL test.

**Table 1: Result of the Unit Root Tests**

ADF							
Level		RGDPG	Btcr	NPLs	GXP	M3	IntR
	t-Statistic	-2.1496	-6.4548	-4.366	-7.567	-6.7987	-1.7868
	Prob.	0.227	0	0.001	0	0	0.381
At First Difference		d(RGDPG)	d(Btcr)	d(NPLs)	d(GXP)	d(M3)	d(IntR)
	t-Statistic	-5.2195	-10.7235	-6.4897	-6.7165	-7.0329	-5.8713
	Prob.	0	0	0	0	0	0

**Source: Authors` Estimate**

### 4.2. The ARDL model

This research applied the akaike information criteria (AIC) to estimate the optimum lags for each of the variables in the ARDL model. Thus, the model was specified and estimated at



different maximum lags, and under each scenario, the equations were tested for serial correlation, heteroskedasticity and normality in their residual. The study results revealed that the ARDL (1, 1, 0, 2, 0, 2) best describes the relationship between real GDP growth and NPLs in the Nigerian economy.

#### 4.3 The bounds test

Table 2 below shows the results of the bound test, and it did not signify the existence of a long-run relationship among the variables. The null hypothesis of “no level relationship” could not be rejected as the estimated F-statistic = 1.68 was lower than the critical I(0) and I(1) bounds at a 5 per cent level of significance. This suggests that a long-run relationship does not exist among these variables, and as such, the basic ARDL model suffices in the analyses of our estimates.

<b>Table 2: Result of the ARDL Bound Test</b>		Null Hypothesis: No levels relationship		
Test Statistics	Value	Signif.	I(0)	I(1)
Asymptotic: n= 1000				
F - Statistic	1.683338	10%	2.08	3
k	5	5%	2.39	3.38
		3%	2.7	3.73
		1%	3.06	4.15
Finite Sample: n = 40				
Actual Sample Size	38	10%	2.306	3.353
		5%	2.734	3.92
		1%	3.657	5.256
Finite Sample: n = 35				
		10%	2.331	3.417
		5%	2.804	4.013
		1%	3.9	5.419

**Source: Authors' Estimate**

#### 4.4. The short-run relationship

From Table 3 below, the results clearly indicate a negative relationship between NPLs and RGDPG in the current period. This is evident in the coefficient of the variable, which is -0.0220. A higher NPL corresponds to a declining GDP in the short term.

Also, there exists a positive relationship between GXP and RGDPG which indicates that as the government pumps more money into the economy through its expenditures, the economy grows. This is in consideration of the computed coefficient of GXP, which stood at 0.0011.

The short-run effects of Btcr and M<sub>3</sub> on RGDPG is positive in current terms but negative in lagged terms. This simply implies that the positive changes in the growth of Btcr and M<sub>3</sub> will cause an increase in economic growth in current terms but a negative growth in lagged terms. However, this lagged comparison may not be necessary as the results of the bound test already showed that there is no long-run relationship among the variables.

IntR showed a negative relationship with RGDPG in the current period at -0.4209 but a positive relationship of 1.1356 at lag one and again a negative and statistically significant relationship of -0.8396 at lag 2. This further supports the earlier literature that found a negative relationship between interest rate and economic growth.

**Table 3: The Short-Run Estimates**

Short-run: Dependent Variable = D(RGDPG)							
	$\Delta$ RGDPG	$\Delta$ Btcr	$\Delta$ NPLs	$\Delta$ GXP	$\Delta$ M <sub>3</sub>	IntR	C
Lag 0		0.0150	(0.0220)	0.0011	0.0002	(0.4209)	3.8226
		0.0520	0.0140	0.0180	0.0687	0.4492	4.4491
Lag 1	0.7298	(0.0940)			(0.0273)	1.1356	
	0.1240	0.0540			0.0730	0.6521	
Lag 2					0.1454	(0.8396)	
					0.0847	0.3801	

Source: Authors' Estimate

#### 4.5. Test for serial correlation

The results of the test for serial correlation is presented in Table 4 below:

##### Breush-Godfrey Serial Correlation LM Test

Null Hypothesis: No serial correlation at up to 2 lags

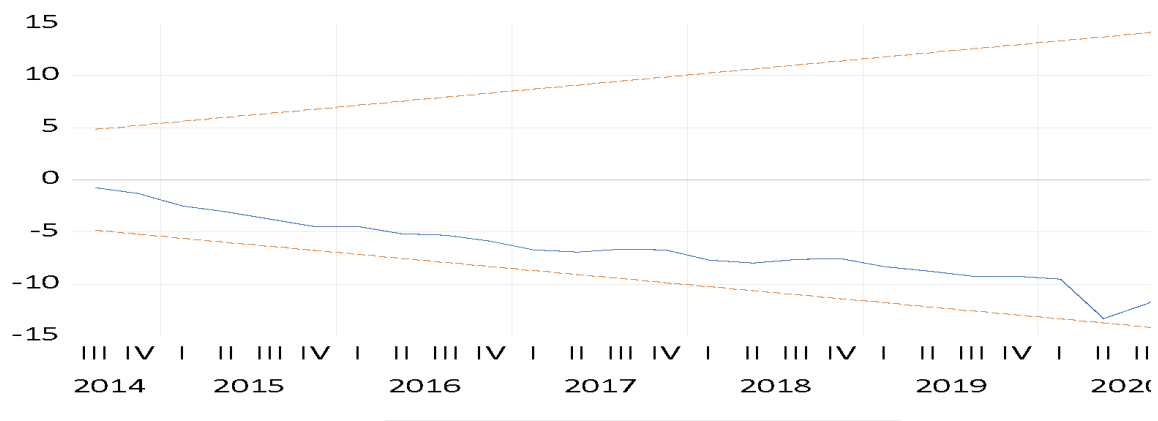
F- Statistics	2.862549	Prob. F(2,24)	0.0767
Obs*R- squared	7.318856	Prob. Chi-Square(2)	0.0257

Source: Authors' Estimate

The stability diagnostic of the model was examined using the Breusch-Godfrey serial correlation test, and it revealed that the probability of the F-statistics (0.0767) was well above 5% level of significance. Thus, the null hypothesis of “no serial correlation” cannot be rejected, suggesting that the model is free from serial correlation.

#### 4.6. The ARDL model stability diagnostic test

The stability diagnostics also showed that the model used was stable (see the output of the CUSUM test below).



**Source: Authors' Estimate**

*The blue line sits between the two red lines, which means that the model is stable.*

### 5. Conclusion and policy implications.

Since the last financial crisis of 2008, governments and central banks worldwide have given closer attention to the management of debt levels in banks and other financial institutions. It came to the fore that beyond encouraging banks to lend more, there is also the need to monitor the quality of these loans as the aggregated failure of the borrowers to repay their loans have severe implications on the economy.

This stand has thus been supported by the result of this research which revealed a negative relationship between NPL and economic growth with a coefficient of -0.022. Thus, we reject the null hypothesis, which states that there is no significant negative relationship between NPLs and the Real GDP Growth rate. This suggests that a higher NPL may have reduced the banks' capacity to give out more loans to the productive sector, which will have an adverse effect on the economy. It may also suggest the bank's reluctance to give out more loans after considering that the loans already disbursed have gone wrong. Hence, rather than grant more loans, the banks may channel their energies towards recovering the delinquent loans.

Thus, it is recommended that considering the considerable effect of the financial systems on the economy, Nigeria's economic management team should include a dedicated watch on the

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prevailing NPL in the financial systems. Furthermore, monitoring NPL should no longer be viewed as the sole responsibility of the CBN but that of all managers of the economy; thus, any policy that could strengthen loan repayment or guard against defaults should be implemented onboard.

This research also supports the long-standing results of a positive relationship between money supply and economic growth. It revealed a positive relationship between government expenditure and economic growth in Nigeria with a coefficient of 0.001. This appears so because, in the last ten years, the Nigerian government has invested heavily in infrastructure towards bridging the actual infrastructural deficit in the country. In the last five years, the government has also had to spend heavily to pull the country out of the recession that the economy entered in Quarter 2, 2016 and Quarter 3, 2020. It, however, raises the question of how much has this heavy spending of the Nigerian government impacted economic growth in the country as the coefficient appears very minute?

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## **The remote working arrangement, workload, and millennial behavior in food and beverages manufacturing companies in Lagos State**

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### **Abstract**

The coming of the Coronavirus (COVID19) pandemic in February 2020 into Nigeria has changed the working pattern of most organizations. The changes include remote working which is expected to help provide some kind of permanent solutions to the unpredictable working environment caused by the Coronavirus pandemic and other unforeseen circumstances that may occur in the nearest future. Remote working and its accompanying workload have now become the order of the day for employees, many of whom are working remotely for the first time. This study, therefore, assessed the influence of remote working and workload on millennials' behavior (sales representatives) in food and beverages manufacturing companies in Lagos State, Nigeria. The study employed a descriptive research design with a survey strategy and using convenience and random sampling technique. Primary data gathered with the aid of structured questionnaires from the millennials. The result of the analysis revealed that remote working arrangement and workload has a significant influence on the behavior of millennials in the food and beverages manufacturing companies. The findings equally revealed that remote working arrangement have a significant effect on millennial behavior. The finding of the study also revealed that remote working arrangement has a significant effect on millennial effectiveness and performance. The study concluded that organizations should address excessive workload carried out by millennials and allow remote working while ensuring a conducive and productive work environment where remote working is not possible; this will help to influence the positive behavior of millennials. It was recommended that there is a need for organizations to continually audit the workload of millennials to ensure that it is not excessive such that it influences behavior negatively. The study recommends among others that while implementing remote-working policies, management should be aware of the various millennial personalities which would help in determining the best way to manage these employees.

**Keywords:** Workload, Millennial, Behaviour, Organizations Remote working

## Ways of keeping children safe online during socio virtualization

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### Abstract

Social media sites have a large number of internet users. Many people find social media as a channel or a tool to entertain themselves, to keep in touch with family and friends and to do their work or to support their activities. Therefore, they have been developed mainly for social interaction and information sharing. So, the internet with its screen and social media accounts makes a positive impact to their lives. The internet and social media are two things that are not been unavoidable and especially youngsters see them indispensable in their life. They get more benefits and find many opportunities by using internet and social media. Young people are being inspired in virtual world and find ways to empower themselves. They can reach more and much information than ever before for their needs, wants and wishes. Social media and its networks give and maintain them new opportunities and new entertain, connections, jobs etc. possibilities. Therefore, being online can help, provide and sociovirtualize (to socialize in the virtual world) to form and develop the new generations self-confidence and social skills in their new virtual lives.

The generation of digital age uses social media webs to connect with friends, to meet new people, to entertain themselves, to share and to get information. The young generation has challenges with using of social media. They can forget the time in front of the screen or during using the internet. They can easily share personal information, photos, or videos according to their purposes. It can be said that this is the generation who is going to be examined and tested with the usage of internet with its advantages and disadvantages. The human beings are going to learn and develop the using of internet and teach each other to protect themselves from the negatives and harmful of social media and effects.

Generally, teenagers described their social media accounts and sharing the way of their information as a positive part of their lives. In this study, how the young generation can use the social media by keeping themselves safe online is discussed.

**Key words:** teenagers, safe online, social media, socio virtualization

## **Physical working environment and welfare facilities related factors causing heavy workload: an empirical study among sanitary workers**

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### **Abstract**

This survey, quantitative and empirical based descriptive research has the objective of analysing the perception of sanitary workers working in private multi-speciality hospitals in Tirunelveli city of Tamil Nadu, India towards various physical working environment and welfare facilities related factors causing heavy workload. In order to achieve this objective, the study has sampled 80 respondents using both convenience and judgement sampling techniques; and from the chosen respondents the primary data were collected using schedule method with the help of questionnaire (translating the questions in respondents' mother language, 'Tamil') along with interview. The secondary data were collected from journals, conference proceedings and government websites to add appropriate significance to the study. Percentage method has been administered to analyse both demographic characteristics of the study and perception of the respondents towards physical working environment and welfare facilities related factors causing heavy workload. The result of the analysis has discovered that majority of the respondents strongly agreed that the factors: location of the hospital and absence of transport facilities by the hospital, distance between departments and garbage storage, lack of technical support to transport garbage and disposal wastes, not allowed to use the life and need to use the steps compulsorily, complex layout of both the departments and the entire hospital, and size of the hospital are associated with heavy workload under physical working environment related factors. Similarly, majority of the respondents have agreed that the factors: absence of accommodation facilities to stay, absence of dedicated break areas and dress changing room, absence of convenience facilities (drinking water and separate toilet), absence of maternity related aids (crèche and feeding room), and no free lunch or no food with concession rate under welfare facilities related factors.

**Keywords:** Physical working environment, welfare facilities, heavy workload, sanitary worker, multi-speciality hospital, Tirunelveli city.

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## 1. Introduction

### Background of the study

Government recognizes that safety and health of workers has a positive impact on productivity and economic and social development. Prevention is an integral part of economic activities as high safety and health standard at work is as important as good business performance for new as well as existing industries. Government of India believes that without safe, clean environment as well as healthy working environment, social justice and economic growth cannot be achieved, and that safe and working environment is considered as fundamental human right. Education, training, consultation and exchange of information and good practices are essential for prevention and promotion of such measures (Government of India, Ministry of Labour and Employment). However, the point to be noted is that whether all business organizations provide the safe and clean working environment to their employees and if the government is strongly and fairly monitoring it. Very few organizations are really concerned about working environment and welfare facilities of their employees; most of the organizations are not, the result of which, the employees are seriously affected. Unlike manufacturing industries, hospital sectors have high risk of infection, and hence, high level of attention should be paid to ensure the safety of the employees. Patients with various diseases and deformities come to the hospitals for treatment, and hence the vulnerability to the infection is high. Moreover, some equipment used by hospital employees are highly risk oriented, especially the equipment such as X-ray, lithotripsy, CT (Computed tomography) and MRI (Magnetic resonance imaging) scan, because these machines emit high level of radiation, which has huge capacity of causing cancer, impotence and other serious disorders. Therefore, the dramatic concern is needed from the management of hospitals towards the safety of all categories of employees in the hospitals.

Similarly, according to Indian Factories Act 1948, with regard to labour welfare aspects, the following facilities should be given to employees to enable them to work comfortable in the workplace: washing facilities, facilities for storing and drying clothing, and facilities for sitting, first aid appliances, canteens, shelters, rest rooms and lunch rooms, crèches and welfare officers. But, this act is not even properly amended in few government institutions, therefore, it is not needed to mention how these facilities are available in private organizations. Very few organizations offer their employees all these facilities following the government's rules and regulations, and also regularly update the facilities subject to the changes the government makes. However, most of the organizations do not, and hence, the employees still have to endure all challenges and continue their work. Most of the hospitals provide all these facilities for medical category employees abundantly, and a significant importance to paramedical category of employees also, but the non-medical category of employees are not given any attention and any facilities in most of the hospitals. Among them, sanitary workers' life in most of the hospitals is highly pathetic. They neither enjoy any safe and clean working environment, nor welfare facilities. However, due to unemployment issues, poverty and community background, they endure all the challenges and stick to their work. Among the non-medical categories employees, sanitary workers are highly ignored and are not cared about at all because of their nature of work, which is mainly cleaning in nature.

Sanitary workers, non-medical category of employees, commonly in most of the organizations come under housekeeping department. They are entirely responsible for maintaining and ensuring cleanliness environment of an organization. Their functions are not only limited to maintaining clean and hygienic environment in the hospital by means of performing the functions: sweeping; mopping; cleaning toilets; transporting and disposing garbage; segregating biomedical and other wastes; but also, their functions extend to giving care to the patients: cleaning stool and urine of the prolonged bedridden patients; transporting the patients from one department to another department through wheel chair or stretcher (for instance: transporting the patients to laboratory, operation theatre, diagnostic centers, catheterization lab, dialysis unit); giving bath to the prolonged bed ridden patients; preparing the patients for surgery by shaving the parts to be operated; washing glasses and lenses which are used in blood laboratory; in case of death, preparing the patients for transport after death. Their functions also extend to providing assistance to other employees and departments: supplying water to the nursing station; supplying hot water to the patients; supporting to nursing assistants for preparing bed for the newly coming patients; assisting to other departments for their daily routine works (most of these work are not part of their work); washing clothes of doctors and other staffs uniforms and clothes of operation theatre. Thus, sanitary workers' work are fully physical oriented.

The study area has attained a remarkable growth in the recent past years: the numbers of business organizations – hospitals, hotels, transport corporations, textile industries and showrooms, para-medical centers (pharmacies, medical laboratory centers including CT and MRI scan centers), educational institutions (nurseries, schools, colleges and Universities), jewelries, small and medium scale industries, financial institutions, insurance institutions and construction organizations have increased tremendously; and all these sectors have brought a great growth to the city. The population rate in the study area, the literacy rate of the people, numbers of the skilled, supervisory and managerial employees have grown significantly; all these developments contributed drastically towards the development of the city. Although rich development has happened in all business areas, still in many organizations, irrespective of types, the government rules and regulations in terms of manpower management are not in practice, and most of the organizations do not follow it seriously; and hence, employees in many organizations work for low salary, have low job satisfaction, heavy workload and high stress. Still, in many organizations, against the labour law, two shift work system with twelve hours duty is in practice, and the employees are given low salary without any additional financial benefits: incentives and increments. Besides, in many organizations, employees are not given enough concern to their career development and self-respect. Autocratic leadership style with strict monitoring and huge discrimination in the areas of recruitment, salary revision, increment, work-area allocation, transfer and promotion can be seen in many organizations. Moreover, in many organizations, the work environment remains unfavorable for work, and welfare facilities are neither available sufficiently nor standard. All these factors remain not only the dissatisfying factors, but also contribute either directly and indirectly to their heavy workload and employee turnover over the time.

In the study area, as far as sanitary workers are concerned, the situation remains very negative and worse. They are not given any benefits properly, and huge discrimination is shown to them in the areas of: salary, increment, bonus, work area and workload, and leave and weekly offs.

The managers of the housekeeping departments show intense autocratic leadership approach toward sanitary workers due to their illiteracy and community background. They are not given any technical support to facilitate their work; and hence, they have to perform all their works physically. The development in the study area in the areas of educational institutions, textile showrooms and other medium and large level business attract sanitary workers towards their organizations; and hence, a big manpower shortage exist in hospital sectors. Besides, the nature of work of sanitary workers in the hospitals push them to leave from the hospital sectors to other sectors. Due to these reasons, the manpower shortage in housekeeping departments at private hospitals is increasingly increasing resorting to heavy workload to the existing sanitary workers. Under this situation, when inadequate welfare facilities, and poor and unsupportive working environment in the private hospitals, in the study area, do not give them support to facilitate the works of sanitary workers, they directly or indirectly are responsible for their high workload. Hence, to know how for both physical working environment and welfare facilities are associated with heavy workload of sanitary workers, this research work has been undertaken in the study area.

### **Statement of the problem**

Rest, physical movements within an organization, distance among various departments within an organization, technical support to perform the work, permission to use the facilities such as lift, lay out of the organization, size of the hospital, ventilation, lighting, accommodation facilities, break areas, conveniences, safety measures, health facilities and cafeteria facilities are directly or indirectly associated with determining the workload of the employees irrespective of the level and type of employees. When the employees are significantly satisfied with the factors: adequate rest, limited physical movements, needed accommodation facilities, convenient break areas, adequate health facilities and safety measures, definitely they would feel their work is both easier and lighter despite the works assigned to them are huge, because mental satisfaction and adequate rest are paramount to tackle the high workload. At the same time, if the employees are neither satisfied, nor fulfilled with these factors, the work assigned to them, even if they are lighter, it would seem harder for them. All these factors are needed for the sanitary workers as same as how they are needed for other categories of employees without any restriction and discrimination, because although sanitary workers do not belong to medical and paramedical categories in the hospital, their contribution is not only deciding cleanliness of the hospital, but also is directly associated with prognosis of the patients. But, in majority of the organizations not only health care industry, but also in other industries, the sanitary workers are not given these facilities adequately. And hence, sanitary workers in these organizations perform their duties with inadequate facilities and unhealthy physical working environment.

In the study area, two shift work system, low salary and lack of manpower remain the major challenges in the private hospitals; and all these factors push the sanitary workers to move off from the hospital work. Moreover, in the study area the sanitary workers largely move to other kinds of works: hundred day's employment scheme which the government has recently introduced; and other types of works, which are risk free and shiftless and have short working hours, (eight hours) such as sanitation works in education institutions, textile industries, manufacturing industries and banks which are highly emerging in the study area. Moreover, with the help of self-help groups, a significant numbers of the sanitary workers have started

small scale businesses. Although all these changes have brought remarkably admirable growth in the life of the sanitary workers, who mainly come from the downtrodden society, the routine works of the hospital sector get paralyzed in majority of the hospitals; and as a result of which the workload of the other remaining sanitary workers is increasing hugely. The hospitals which either have adopted or are keen to embrace technologies to assist sanitary workers in order to perform their routine sanitation work regularly follow three shift work system; and provide significantly decent salaries, do not face huge problems that arise as a result of lack of manpower, because in these hospitals employee turnover rate is low and employee satisfaction rate is high. On the contrary, the hospitals which have not adopted the technologies and still follow the traditional way of work patterns with two shift work system and offering lower salaries still face serious challenges due to the lack of manpower. Thus, under the circumstances in which most of the hospitals face serious manpower shortage, when the hospitals have poor physical working environments and facilities: complex layout of the hospital; distance between the hospital and transport station and no transport assistance from the hospital; long distance between two departments; lack of technical support; discrimination and bias shown by the management among the staffs to utilize the hospital facilities, the employees get tired very soon and they feel their work as a burden. The persistence of the same situation for prolonged period push the employees to leave from the job, which again increase the workload of the other remaining employees.

In most of the hospitals, sanitary workers are not given welfare facilities sufficiently; and in some hospitals, even though physical working environment is well facilitated, and welfare facilities are available abundantly; the sanitary workers are not allowed to avail them because of the community and lower level employment. It can be clearly seen in most of the hospitals that the sanitary workers either sit on the floor or outside of the rest room even though chairs are available; and sanitary workers are not given transport allowances (their salary in most of the hospitals are low); safety devices needed to use during their work such as face masks, hand gloves, shoes and slippers, vaccination, and wheelchairs and crèches are not given to the sanitary workers and as a result of this the sanitary workers perform their duties without safety devices. Their illiteracy and submissiveness and community background do not allow them to claim these facilities from the management assertively. Similarly, technical support are not given to the sanitary workers sufficiently. Still, in majority of the hospitals including big corporate hospitals, the sanitary workers do not use vacuum cleaner and advanced technical devices to perform cleaning and mopping tasks; instead they use the routine manual methods to perform these functions.

In the study area, due to the population growth and economic development, most of the speciality hospitals have upgraded into multi-speciality hospitals with many floors and various departments to accommodate different kinds of patients and other facilities. The hospitals which have been built recently have lift facilities, but few hospitals do not have ramp facilities. On the contrary, most of the hospitals which were built in olden days do not have lift facilities; and instead they have steps and ramp facilities even though they are multi-speciality and large hospitals. Similarly, although some hospitals are large in size and have all medical facilities, still they do not have the basic facilities needed for the sanitary workers sufficiently such as stretcher and wheelchair and other facilities which are needed for transporting the wastes. So, in the hospitals in which lift facilities are available with no ramp facilities, the sanitary workers

can do their work simply and easily by carrying the wastes through lift, but most of the hospitals do not allow the sanitary workers to use lift. Therefore, they have to either drag or lift the wastes and use the steps to transport the wastes. Therefore, in these hospitals, although advanced infrastructures such as lift facilities are available, they are of no use to the sanitary workers. Similarly, although some hospitals have ramp facilities without lift, the ramps do not cover all the floors. Most of the hospitals have ramp facilities to cover patient care areas; however, other areas which are used for administrative purpose do not have ramp facilities. Therefore, the sanitary workers need to do more physical work to perform housekeeping works, which takes double the energy of them.

Thus, due to either absence or defect in both physical working environment and welfare facilities in the study area, absenteeism and higher employee turnover among the sanitary workers are reported as the major challenges in majority of the hospitals, and they are predominantly higher in rate. The high employee turnover rate increases the manpower shortage; and high absenteeism rate increases workload of the existing employees. Since both physical working environment and welfare facilities are responsible for enhancing employee turnover and absenteeism rates, hospitals need to pay enough attention on these factors and take necessary steps both to fix the defects in physical working environment and enrich the welfare facilities in the hospitals in order to reduce both employee turnover and absenteeism, and thereby reduce the heavy workload of the sanitary workers. Hence, this study assists the hospital management to get deep insight into the various factors associated with physical working environment and welfare facilities related factors causing heavy workload among the sanitary workers.

### **Objective of the study**

The present study aims to identify perception of the sanitary workers towards physical working environment and welfare facilities related factors and their association with heavy workload.

### **Scope of the study**

The study has focused on sanitary workers working with private multi-speciality hospitals in Tirunelveli city, which is the capital of Tirunelveli District, located in south end of Tamil Nadu State, India. The study has analyzed various variables associated with physical working environment and welfare facilities related factors causing heavy workload.

### **Significance of the study**

The result of this study will be helpful for three categories of people: hospital administrators, sanitary workers and future research scholars in the following way. The hospital administrators can use the results of this research as a tool examine the physical working environment status in the organization, and make necessary changes either to alter the defect or strengthen the existing facilities or adding new facilities for sanitary workers. For instance, hospital management can build accommodation facilities, rest room and toilet, establish separate drinking water facilities, and introduce new technologies for sanitary workers to enable them both to perform their work in a simple way and to enjoy a comfortable work environment, which will help them to manage their work easily. Similarly, policy level changes can be made to enable sanitary workers to use the following: lift facilities, transport allowance facilities, free



lunch or food at concession rate and maternity benefits, all of which directly or indirectly assist them for their mental satisfaction, which eventually reduce their heavy work burden.

To the housekeeping managers, this study assists to get deep insight into how physical working environment and welfare facilities related factors are associated with heavy workload, and help them to take necessary steps, at their level, to reduce their workload by modifying working environment and welfare facilities. For instance, the housekeeping managers can recommend to the top management about the necessary technologies to be introduced to facilitate the work of sanitary workers. Moreover, the results of this study will help the managers to relook into their leadership style, and how to train their supervisors as to how to deal with the sanitary workers on humanity basis. For example, how to deal with a pregnant woman when both welfare facilities are insufficient and physical working environment is not favourable.

The results of this study will give knowledge to sanitary workers as to how physical working environment and welfare facilities related factors are associated with their heavy workload, and also give them awareness as to how to assertively claim the facilities they deserve to have, that are associated with their welfare and workload. The variables, population, sample size, sampling technique, data collection method, tools of analysis and study area and so on, used in this study give strong base to the future research scholars.

## **2. Review of literature**

Workload can be expressed as the amount of work that should be done at a certain time with a certain quality (Saglamari G and Cinabal B, 2008). As for workload perception, it is relative which may vary in accordance with the circumstances that an employee has been experiencing. The concept workload is the perception that the work loaded above normal to the individual in the workplace. For most of the job, if the natural load of the work has not been calculated mathematically, it is possible to state that this concept has an abstract content based on the perception (Kesar, 2006). In this present research, the researcher has defined heavy workload as: the volume of work added additionally (both mentally and physically) with routine works of sanitary workers due to improper and lack of physical working environment, and inadequate welfare facilities. The researcher has stated the following factors under physical working environment: layout of the organization, distance between various departments and waste disposal point, technical support given to sanitary workers for their daily routine operational work, size of the firm and manpower support according to it to cover up cleaning work as physical working environment. Similarly, the researcher has referred the following factors under welfare facilities: accommodation facilities, break areas, dress changing room, convenient facilities (toilet rooms and drinking water facility), maternity benefits and free lunch or food at concession rate

Birhanu M et al., (2018) studied workload determines workplace stress among health professionals working in Felege-Hiwot Referral Hospital, Bahir Dar, Northwest Ethiopia and found that most health professionals had high workload due to lack of inadequate staffs, night and weekend call duties besides their routine works. The respondents did not have enough time with their family. They did not get extracurricular activities from their hospital administration that would decrease their work stress. The result found that health professionals who work

more than fifty hours per week had more stress and those who worked night shift had more stress than day shift work. Health professionals' educational level did not significantly influence the level of workplace stress. There was no significant association between monthly income and stress level among health professionals. Job requirements more than ability, frequently changing work shift, working with opposite sex, mismatching between hospital and employees' objectives were the sources of workplace stress among physicians. Working with opposite sex, feeling isolation, lack of stability at home and supervising work of other people were the source of work stress among nurses. Working with opposite sex, being not respected, and job requirement more than the ability, lack of stability at home, unclear promotion requirements, no participation in departments' decision making were the sources of stress among radiographers. Workload and working in night shift were significantly associated with workplace stress.

Mercin S et al., (2018) analyzed the workload of nurses by examining average degree of difficulty of the workload of a certain nursing procedure, total workload of nursing procedure and workload of each nurse in different clinics. The study observed that majority of the respondents were in surgery clinic followed by internal medicine clinics, gynecology and obstetrics and pediatrics clinics. The result of the study discovered that the most difficult procedures performed by nurses were: time taken to give newborn baby to the mother, vaginal exam and vaginal delivery. The lowest difficult procedures: giving oxygen, oral medicine, blood glucose measurement. The study also revealed that internal medicine clinic had the maximum workload score per month followed by surgery clinic and gynecology and obstetrics clinic.

Munandar A et al., (2018) studied the effects of work stress, workload and work environment on job satisfaction and its implication on the employee performance of Aceh investment and one stop agency' from 138 civil servants working in the public agency and found that increased job satisfaction can have an impact on decreasing employee job satisfaction. Employees with high stress levels will tend to have low job stress. Conversely, when employees experience low stress levels, job stress will increase. Workload can encourage employees to work better. They are motivated to carryout tasks according to the workload given. When an employee has a little or no workload at all, the employees' performance will be low. The work environment can also encourage an increase in employee performance. Increasing the quality of work environment can directly improve employee performance. The result also found that job stress has a negative impact on the performance of employees. Workload and work environment have a positive influence on the performance of the employees. Job stress is positive and can significantly influence the performance of the employees. The existence of job stress strengthens the effects of work stress on the performance of the employees. The result also indicated that job stress is not able to strengthen the influence of workload on the performance of the employees. Job stress cannot strengthen the influence of the workload on employee performance.

Kokoroko E and Sanda MA (2019) in their study, 'the effect of workload on job stress of Ghanian OPD nurses: The role of co-worker support' tested three hypotheses: the relationship between workload and job stress; coworker support and job stress; and coworker support will significantly weaken the positive relationship between workload and job stress. The result of the study discovered that there was a significant positive relationship between workload and job stress levels of OPD nurses; co-worker support did not significantly correlate with the job

stress level of the respondents. Co-worker support strengthen the positive relationship between workload level and job stress level of the respondents. Workload of OPD nurses had a positive effect on their job stress, i.e., as workload of nurses increased, their level of stress relating to their job also increased. The study also found that coworker support level did not significantly correlated with job stress level: a positive relationship between co-workers support level and job stress level. The study also found that co-workers support strengthened the positive relationship between workload and job stress, which means higher the job stress levels are related to higher workload levels for OPD nurses reporting higher level of coworkers support but not the vase for these reporting lower levels of coworkers support.

Rajan D (2019a) investigated how various leadership related factors associated with workload of the sanitary workers and result found that the factors, bias in workload allocation, not observing and enquiring about health condition, bias in work area allocation, taking revenge and purposefully assigning work, not allowing employees to rest in the course of work during tired, treating employees based on caste, community and religion, allocating work area without consent of the employees, preparing work schedule in bias, not introducing any advanced technology to replace manual work, not stopping or questioning other department employees when they assign work, behaving rudely and disrespectfully and not supplying adequate manpower have been strongly agreed by majority of the respondents. The factors, not listening to personal and health issues, not controlling seniors when they pass their work over shoulder of the juniors and not communicating properly about the tasks and how to perform it have been agreed by majority of the respondents.

Rajan D (2019b) analysed perception of the sanitary workers towards lack of resources related factors causing heavy workload from the sample of 80 sanitary workers working in leading private multi-speciality hospitals, Tirunelveli city of Tamil Nadu, India and found that majority of the respondents strongly agreed that resources related factors such as inadequate manpower, sudden absent of co-worker, sick of co-worker during the work, lack of cooperation and coordination of co-workers and other category of employees, not filling vacancy in the department, lack of equipment and not introducing machineries, repair of machines and management not taking effort to repair it, lack of protective devices to protect from the hazards and inadequate or absence of information about work and work processes and protection from hazards were associated with their heavy workload.

Rajan D (2019c) in his study identified and described the perception of the sanitary workers private multi-speciality hospitals in Tirunelveli city of Tamil Nadu, India toward various shift work related factors causing heavy workload. The result of the study revealed that majority of the respondents strongly agreed that the factors such as two shift work system with 12 hours duty, sudden extension of duty, continuous day or night shift, fixing schedule without consent of the employees, rigid approach in implementing shift schedule, lack of cooperation of co-workers to switch over shift work during emergency situations, no adequate off between two shifts, compulsorily forcing employees to come for duty during their off period, autocratic approach of the managers in preparing and executing shift schedule and managers not permitting to swap shift schedule with co-worker with mutual consent were the factors associated with shift work causing heavy workload among sanitary workers.

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Saputera B and Suhermin (2020) studied the influence of workload, work stress and supervision to clinical nurse performance. The study examined four hypotheses: relationship between workload and performance, between work stress and nurse performance, between supervision and nurse performance, and between workload, work stress, supervision simultaneously to nurse performance. The data were collected from nurses in the emergency room, intensive care unit, and operation theatre and inpatient and outpatient installations. The result found that the level of workload was heavy, the level of stress was low and the level of performance was good. The hypotheses analysis discovered: both workload and supervision did not affect work performance of nurses – the heavier the workload, the better the nurses’ performance. Work stress negatively affected work performance of nurses – high stress caused poor nurse performance. The hypotheses also proved that workload, work stress and supervision had a simultaneous effect on nurses’ performance – they directly affected work performance.

Rajan D (2020) studied perception of the sanitary workers towards various long working hour related factors and its association with their heavy workload in Tirunelveli city of Tamil Nadu State, India. The study found that, majority of the respondents strongly agreed that, long working hours related factors causing heavy workload to sanitary workers were long and unsocial working hours, rigid rules of the hospital with regard to working hours, inability to relieve from the duty on time, arrival and admission of the patients at the time of relieving from the duty, irregular shift work, inadequate rest in duty and challenges in travelling.

Harmen H et al., (2020) investigated the effect of workload and organizational commitment on employee job satisfaction of PT Perkabunan Nusantara III Medan from the samples of 89 respondents. The study tested three hypotheses: workload affects job satisfaction; organizational commitment affects job satisfaction; and both workload and organizational commitment simultaneously affect job satisfaction. The regression analysis discovered that when the workload and organizational commitment increases or decreases, job satisfaction experience change. As far as effect is concerned, workload does not have a significant effect on employee satisfaction; organizational commitment has a significant influence on employee satisfaction; similarly, both workload and organizational commitment simultaneously affect the job satisfaction of employees.

Hoogendoorn ME et al., (2021) planning on nursing staff on the intensive care: A prospective descriptive multicenter study’ described differences in the planning of nursing staff on the ICU in the COVID period versus a recent non-COVID period and to describe differences in nursing workload in COVID-19 patients, pneumonia patients and other patients on the intensive care unit and to assess the possible differences in nursing activities scores between the different groups. The result of the study showed that the increasing demand for nursing care during the COVID-19 period was recognizable in both a higher number of patients per nurse and a higher mean nursing activities scores per nurse, compared to same month in 2019. Although the number of new admission on the ICU was lower, the nursing activities score per nurse and the number of patients per nurse were higher. The higher nursing activities score per patient by the long length of study of COVID-19 ICU patients. The continuous influx of COVID-19 patients in combination with a long length of stay and therefore a delayed outflow contributed to a high pressure on ICU beds. The result of the study clearly showed that COVID-19 patients cause a significantly higher intensive care unit nursing workload compared to pneumonia patients in the non-COVID period. This higher workload was mainly due to nursing intervention like

monitoring and titration with bedside observation, respiratory care, mobilization, hygienic procedures and taking care for the patients and his or her relatives. The increase in time for monitoring and titration with bedside observation is possibly related to hygienic procedures. Due to combination of a higher workload per patient, there was an increasing demand for the need for nursing care per intensive care unit patient.

Jornuad PD et al., (2021) investigated the workload, burnout level, work performance of the teacher and also exploring the significant relationship between the teachers' workload and their burnout experience and between teachers' workload and their work performance. The result of the study showed that most teachers said they generally spent too long on planning and preparation and correcting pupil's work. The findings implied that the teachers experience burnout in the areas of career satisfaction, administrative support, coping with job related stress and attitude towards students. In terms of burnout, teachers have the highest burnout level when they experience emotional exhaustion which is followed by lack of personal accomplishment and depersonalization respectively. The study found that there was a highly significant relationship between workload and career satisfaction; workload and perceived administrative support; and workload and coping with job related stress; workload and attitudes towards students.

Rajan D (2021a) analysed the perception of the sanitary workers working in private multi-speciality hospitals in Tirunelveli city of Tamil Nadu, India towards various role and compensation related factors causing heavy workload. The result of the analysis has found that factors: ill-defined roles and responsibilities, receiving conflicting messages from two or more heads at the same time, person's interest remain contradict with the job role, salary is not adequate in accordance with the work performed, discrimination and bias in fixing salary and inadequate non-monetary rewards for effective contribution at work were strongly agreed by majority of the respondents.

Rajan D (2021b) analysed various organization structure and management practice related factors causing heavy workload among sanitary workers, and the results discovered that the factors: complex organization structure; not communicating the objectives of the task and its importance towards organization to the sanitary workers; orientation and clear communication about work processes; lack of participation at departmental and organizational level decision making; frequent changes made in the organization and inadequate information about them; inadequate welfare facilities for sanitary workers; autocratic leadership style with lack of motivation; inadequate respect for sanitary workers and huge discrimination; and low and unfair salary system; discrimination in salary and other benefits were strongly agreed by majority of the respondents that they were associated with their heavy workload.

Rostamu F et al., (2021) in their study investigated the moderating role of job control in relation to mental workload and job satisfaction of health care workers. The result of the study found that mental workload of nurses was higher significantly than midwives and administrative workers and mental workload of midwives was significantly difference compared to administrative workers. Nurses and midwives had significantly higher job satisfaction and job control than administrative workers. The level of job control between nurses and midwives was almost similar. The result indicated that by lowering the workload in employees, more job satisfaction was observed, and they had a better control over the assigned affairs. Age, work

experience had a significant relationship with mental workload. However, no significant relationship was found between age and work experience with job control. The study also found that job satisfaction is elderly healthcare workers was higher compared to younger people.

Ramdas IM and Sari DW (2022) examined work related stress on nurses and analyzing its correlation with workload, work shift, work environment, age, gender, education background and working period. The result of the study found that the worst symptoms of work related stress were difficulty in falling asleep and feeling scared. Most frequently experienced symptoms were anxious feelings and gastro-intestinal symptoms. Most bad symptoms experienced were difficulty in falling asleep and gastro-intestinal symptoms. The study found that there was a significant correlation between the working period of nurses and job stress, which indicates that dissatisfaction and unpleasant condition for nurses during work. Study also found that significant correlation between shift working and nurses' work related stress. Nurses who work in shifts experience higher work stress. The results of the study found that nurses' work related stress was significantly related to workload because of high bed occupancy rate during COVID 19 outbreak which also increased nurses' workload. The study also found that physical work environment was significantly related to work stress.

Maulana A and Risal M (2022) in their study analyzed the effect of work motivation and workload on employee performance in regional research and development agency and found that motivation has a positive and significant influence on employee performance. The result discovered that workload has a positive and significant influence on employee performance meaning that if the workload is getting better or the workload is getting lower, the employees' performance is getting higher. The study also found that in the study area, appropriate workload such as sufficient numbers of employees, predetermined workload standards and clear work targets will improve employee performance in terms of timeliness, quality of work carried out which means that if the workload given is low or in accordance with the provisions, the performance of employees at the study area will also increase. The result indicated that workload and work motivation have a positive and significant impact on the employee performance in the study area population. The study has observed that employee performance in terms of increasing quality, completion of work time is influenced by the motivation given by the leadership, employees who are obedient and obedient to the working hours and employees who take much initiatives. The study suggested that work motivation need to be increased and workload need to be further improved so that the achievement of employee performance will improve better.

From the literatures reviewed, it can be learnt that the study undertaken in the study area concerning heavy workload of sanitary workers have been discussed from leadership, resources, shift work, long working hours, role and compensation point of view, i.e., how leadership, resources, shift work, long working hours, role and compensation, and organization structure and practice related factors are associated with heavy workload of sanitary workers in the study area. So, there is a scope to research as to how physical working environment and welfare facilities related factors are associated with heavy workload of sanitary workers. Hence, this present research has been undertaken in the study area with the objective of how physical working environment and welfare facilities related factors are associated with heavy workload of the sanitary workers, which has not been discussed so far.

### 3. Research methodology

This survey and empirical based quantitative research has adopted descriptive research design since it describes various physical working environment and welfare facilities related factors and their association with heavy workload quantitatively. The element of this research is sanitary worker working in private multi-speciality hospitals in Tirunelveli city. A sample of 80 sanitary workers was chosen from the leading private multi-speciality hospitals in Tirunelveli city of Tamil Nadu using both convenience and purposive sampling techniques. Primary data for this study were collected directly from the sampled sanitary workers using schedule method of data collection. The structured questionnaire which had been constructed based on knowledge of personal experience and observation of the researcher in the field of hospital administration was administered to collect the primary data. The questionnaire consisted of two sections namely 'Section A' which described demographic characteristics of the respondents and 'Section B' which explained various physical working environment and welfare facilities related factors and their association with heavy workload. The questionnaire was constructed based on Likert's five point scale which carried five responses for each question namely Strongly agree, Agree, No opinion, Disagree and Strongly Disagree that had the values of 5, 4, 3, 2 and 1 respectively. Each question in the questionnaire was translated to the respondents in their mother language, 'Tamil', and their choice of response was recorded. The secondary data were collected from journals, conference proceedings and government websites to add appropriate significance to the study. Percentage method has been administered to analyze both demographic characteristics of the respondents and perception of the respondents towards role and compensation related factors associated with heavy workload.

### 4. Analysis and Interpretation

**Table 1: Profile of the respondents**

Variable	Description	Frequency	Percentage
Sex	Male	16	20.00
	Female	64	80.00
Age	Below 30 years	07	08.75
	Between 30 and 35 years	22	27.50
	Between 35 and 40 years	33	41.25
	Above 40 years	18	22.50
Marital Status	Married	72	90.00
	Unmarried	08	10.00
Year of working experience	Below 2 year	12	15.00
	Between 2 and 4 years	32	40.00
	Between 4 and 6 years	26	32.50
	Above 6 years	10	12.50
Salary (Rs)	Below 5000	12	15.00
	Between 5000 and 7000	41	51.25
	Between 7000 and 9000	21	26.25
	Above 9000	06	07.50

Source: Primary Data, 2021.

It can be understood from Table 1 that among the respondents, 20.00% were male and 80.00% were female. Of them, 8.75% were below 30 years of age, 27.50% between 30 and 35 years, 41.25% between 35 and 40 years and 22.50% were above 40 years of age. Furthermore, among them, 90.00% were married and 10.00% were unmarried. In all, 15.00% had below 2 years of work experience, 40.00% between 2 and 4 years, 32.50% between 4 and 6 years and 12.50% had above 6 years of work experience. Among them, 15% were drawing below Rs. 5000 of salary, 51.25% between Rs. 5000 and 7000, 26.25% between Rs. 7000 and 9000 and 07.50% of them were drawing above Rs. 9000.

**Table 2: Perception of the respondents towards lack of resources related factors causing heavy workload**

Physical working environment and welfare facilities related factors	SA (%)	A (%)	NO (%)	DA (%)	SDA (%)
<b>Physical working environment</b>					
Location of the hospital and absence of transport facilities by the hospital	91.25	08.75	0	0	0
Distance between departments and garbage storage	91.25	08.75	0	0	0
Lack of technical support to transport garbage and disposal wastes	88.75	11.25	0	0	0
Not allowed to use the lift; and need to use the steps compulsorily	68.75	31.25	0	0	0
Complex layout of both the departments and the entire hospital (poorly designed layout)	88.75	11.25	0	0	0
Size of the hospital	98.75	01.25	0	0	0
<b>Welfare facilities</b>					
Absence of accommodation facilities to stay	100.00	0	0	0	0
Absence of dedicated break areas and dress changing room	95.00	05.00	0	0	0
Absence of convenience facilities: drinking water and separate toilet	96.25	03.75	0	0	0
Absence of maternity related aids: crèche and feeding room	96.25	03.75	0	0	0
No free lunch or no food with concession rate	100.00	0	0	0	0

Source: Primary data, 2021.



The researcher presents below the detailed interpretation to the findings of the analyzed data. In the interpretation of each variable discussed in this study, with the analyzed data, the researcher has also added the information collected from the respondents by discussion and observation. Besides to these, the researcher has shared his experience and rich practical knowledge obtained in the field of hospital administration to add appropriate significance to the interpretation.

### **Location of the hospital and absence of transport facilities by the hospital**

Majority of the respondents have strongly agreed that location of the hospital and absence of transport facilities from the hospital are associated with their heavy workload. When they were interviewed, majority of them said, from their house they have to travel long distance in the bus and also to walk a lot of to reach the hospital for duty; and they have to follow the same when they return home from the duty after the duty hours. They also complained that they do not receive any assistance from the hospital for transport either in the form of vehicle or transport allowance.

Body energy is equally important to perform both physical and mental works. If energy is hugely spent before reaching the working spot, the employees cannot do the work with full effort, and they cannot finish the work completely and perfectly. Travelling plays a major and unavoidable part in the daily working activities; it cannot be expected that every employees can stay at the hospital's hostel; or go to the duty from nearby distance. Definitely, a significant numbers of employees go to the duty from the long distance, because most of the hospitals remain within the city limit; and it is really expensive to live within the city limit. Due to the cost of living in the city limit, most of the employees choose their residential place outside the city limit and travel to the workplace using public transport. Those who are in higher position and highly paid salaried employees either live within the city limit or travel by their own car. Low salaried employees live outside the city limit and travel through public transports or two-wheelers. But, as far as sanitary workers are concerned they neither live in hospital's hostel, nor within the city limit, nor immediately outside the city limit. Instead, they live far from the city limit, especially most of the sanitary workers go to the job from very remote village areas, because all sanitary workers are uneducated, downtrodden people and belong to economically weaker section; and hence they are not affordable to live within the city limit or immediately outside the city limit.

To reach the working spot in the study area, normally the sanitary workers travel through 2 or three buses. They normally use public transport to travel to the work; and public transports always remain crowd because of the cheap transport fares. The stopping point of these public transport vehicles remain usually far from the location of the hospitals in most cases; and hence, to reach the workplace they have to either walk or use auto rickshaw (called in some places as tuk-tuk; baby taxi; moto-taxi - a vehicle used to carry 3 peoples within the city limit) or another city bus. But, normally the sanitary workers choose walking to go to the working spot because it is not affordable to travel by auto rickshaw (it collects much transport fares), and it takes sometimes from 10 to 30 minutes' walk to reach the work spot. Thus, the sanitary workers travel through two to three buses and walks up to 30 minutes to reach the work spot. These activities definitely suck their most of energy. Moreover, in the study area, in the all hospitals, the sanitary workers should reach the work at 8.00 am, especially before all other department

employees and the patients arrive at the hospitals, which normally come to the hospital after 9.00 am. Therefore, the sanitary workers should reach the work spot one hour before other category of the employees and the patients reach the workplace. So, they have to wake up and get ready at house around 6.00 am to 6.30 am to start their journey to the work. Thus, before they reach the work spot they need to travel for 2 hours which include their walk to reach their spot. In the workplace also, they need to work for twelve hours because still at the most of the hospitals twelve hours duty is followed. In the workplace the nature of the sanitary workers work is fully physical oriented and without any mechanical devices they work for twelve hours; and this would suck their energy fully. In addition to the energy they spent during travel, when they do the work in the workplace with fully physically, they feel their workload become double. Thus, the works of the employees start immediately after they start from the house. Therefore, before they reach the work spot half of their energy goes off before they start their work.

Moreover, their working hours also is too long: 12 hours in most of the hospitals in the study area, and all hospitals follow the rules very rigidly especially for sanitary workers. Their working hours start at 8.00 am and ends at 8.00 pm; and although they finish their work in advance, they are not allowed to leave from the duty in advance, but the same is not followed rigidly with other category of employees such as other non-medical, paramedical and medical category employees in the hospital. After their work, they go through the same travel conditions to reach home; thus when they reach home approximately at or after 9.00 pm which are too late for them to prepare their dinner and eat. When they go to the bed after their dinner and other household work, the time may be midnight, which although give them deep sleep due to the physical work and tiredness, they cannot get enough amount of sleep because they have to wake up very early in the next day morning to get ready for the work. Very few hospitals give their employees transport allowance with their salary, which give them at least mental satisfaction despite long distance and absence of transport support from the hospital. However, many hospitals do not provide them any allowance for transport with their salary, which not only causes them mental dissatisfaction, but also causes mental work burden. Thus, since long working hours and location of the hospital, long distance and traffic difficulties are associated with their work, the hospitals can provide either transport allowance or transport facilities at least to cover city limit, which will be of great helpful for employees to not only save little money (because a ransom of amount is gone to travel within city limit), but also assists them to reach the work spot on time.

### **Distance between departments and garbage (waste or trash) storage place**

Waste collection from multiple ends, transporting them to the particular point and disposing them are the main tasks of sanitary workers besides cleaning, mopping and providing care to the patients. Wastes arise at multiple ends in the hospitals and they vary as both medical and non-medical wastes with significant risk levels. In a day, according to the volume of patients admitted in the hospital as inpatients, intensity of other routine works, and numbers of daily patients arriving at the hospitals, the wastes accumulated vary and transportation of the wastes also varies. Although all employees take role in disposing the wastes and have knowledge about biomedical wastes, their role ends with disposing the wastes in the dust bin. However, the role of sanitary workers is manifold: from segregating the wastes whether anatomical or non-anatomical wastes by carefully checking and transferring them to the concerned disposal

boxes, and transporting them to the disposal point. Thus, in waste disposal, the workload of sanitary workers is higher than others.

Majority of the respondents have strongly agreed that 'distance between departments and garbage storage place' is associated with heavy workload. In interview, majority of them said that they walk many times from wastes originating point and waste disposal point, and the distance between these points is long. In the study area, waste segregation and disposal are highly concerned, because sanitary workers dealing with waste segregation and disposal are highly uneducated; and other employees dealing with wastes do not do their work completely in a responsible way. Moreover, most of the hospitals do not give adequate training to their employees with regard to disposal of wastes; and hence the workload of sanitary workers is high in the study area. Although separate bins (boxes) are used in each department for anatomical waste, microbiology and biotechnology wastes, waste sharps, discarded medicines and cytotoxic drugs, solid waste, liquid waste, and incineration ash and other chemical wastes, most of the employees do not follow the instructions properly; and hence, the work of segregating the wastes according to the rules of bio-medical waste management, all works falls on the shoulders of the sanitary workers. This definitely gives them additional tasks, which normally increase their workload. Because of their lack of assertiveness and illiteracy, sanitary workers do not insist other categories of the employees, who handle the wastes, to use the right way of disposing the wastes, i.e., to put the wastes in the right box according to the types of wastes. In very few hospitals, routine inspection is made to know if the employees of all departments follow the guidelines of disposal of wastes, and if there is any mistake or deviation in following the guidelines, the employees are either advised or cautioned or given training to them. But, most of the hospitals do not do it routinely and hence the work burden of the sanitary workers increase.

Another important matter to be discussed with regard to waste disposal is transportation of the wastes to the point where from the wastes are transported to outside the hospital for permanent disposal; and this is the function of external agency. In most of the hospitals, from the point of generation of the wastes to the point of disposal, either sanitary workers alone, or two or three sanitary workers jointly lift the wastes in the big buckets by hands and transport them; and in most of the hospitals there is no support of the mechanical device to transport the wastes; and hence, the workload of sanitary workers again increase. Few hospitals have given mechanical devices support such as pushing or pulling machines to transport the wastes to the disposal point. Some hospitals do not have ramp facilities and some hospitals do not have lift facilities. In some hospitals, sanitary workers are not allowed to use lift machines, and lift is allowed only for patients. In these hospitals it is more difficult to transport the wastes if there is no mechanical devices' support.

The transportation of the wastes from inside the hospital to the outside to be disposed occupy important place in waste management; and the role of sanitary workers remain paramount in it. Mostly there is external body called biomedical waste disposal agency is looking after this function. There is one or two agencies in each cities or district functioning and collect the wastes from the hospitals and dispose them according to the biomedical norms. They collect the wastes once or twice in a week or two weeks from the hospitals. In the study area, there is one agency which collect the biomedical wastes from the hospitals, (other wastes are collected by city corporation), and it collects the wastes once or twice in a week or month according to

the size of the hospitals. In the small hospitals, it collects the wastes once in a week, and in the large hospitals twice in a week. Normally, some hospitals scientifically manage biomedical wastes, i.e., at the point of origin, the employees segregate the wastes according to the norms; and the same is stored in the big container at the point of disposal. Due to this, it is easy for the biomedical agency to carry them and go; but in some hospital on the day in which the biomedical agency comes to collect the wastes, sanitary workers segregate the wastes according to the norms. And in this types of hospitals, the workload of the sanitary workers increase because they have to do huge work to segregate the wastes as per the norms.

Distance between wastes originating points and final disposal point has a significant role in deciding high workload of sanitary workers. In the study area, in most of the hospitals the waste collection and disposal methods are not scientific in nature, and hence, the place where the waste is finally disposed is normally placed at significantly far distance, especially close to the toilet rooms, and those places are neither given importance nor maintained hygienically. When the hospital neither have lift facilities, ramp facilities nor allowing the employees to use lift facilities, definitely the workload of the employees would increase because they have to lift and carry the wastes of a huge weight physically. Similarly, when the sanitary workers carry the weight physically without any mechanical devices, then workload of the employees would normally increase. Thus, distance between wastes originating points and wastes disposal point has an important role in enhancing the workload of sanitary workers; and hence, the hospital management should arrange transport methods to transport the wastes and implement scientific ways of disposing methods to reduce heavy workload of sanitary workers.

### **Size of the hospital**

Size of the hospital occupies an important role in determining workload of the employees. The large size of the hospital with adequate numbers of sanitary workers does not cause heavy workload; at the same time, large size of the hospital with inadequate strength of the sanitary workers cause heavy workload to sanitary workers. Normally, in all multi-speciality hospitals corridor, car parking areas, visitors' areas, outpatients' waiting areas, and pathways including steps are common areas, and department wise areas such as patient care areas (intensive care unit, private wards, general wards, emergency department, catheterization laboratory, blood laboratory, pharmacy, outpatient departments) and administrative departments are the places to be cleaned by sanitary workers. The workload of sanitary workers vary according to the areas they are posted. Those who are posted in common areas and administrative do not involve in patient care activities, and they just carryout cleaning, mopping and some assistance activities; those who are posted in patient care areas not only perform cleaning and mopping activities, but also involve in the patient care activities. Thus, workload of sanitary workers become lighter or higher depending upon the work areas they are posted. But, since in the hospital sectors, shift work system is in effect, both light and higher work goes in rotation to the employees.

Majority of the respondents have strongly agreed that 'size of the hospital' is associated with their heavy workload. When interviewed, majority of them reported that the layout of the hospital is much complex, and it sucks too much of their energy. In the study area, multi-speciality hospitals, to an admirable extent, have grown largely; and all hospitals are extending their facilities such as car parking areas, large waiting halls and corridors with new styles in

order to satisfy all kinds (lower, middle and upper) of people. Similarly, since all private hospitals wish to run their hospitals in corporate style, and like to enchant the patients, they give more importance to the cleanliness aspects of the hospitals. Hence, those who work in the common areas need to clean and mop the floor at least minimum two times; and need to wash the common toilets which are used by outpatients and visitors frequently. Thus, although they do not involve in the patient care activities, the workload of the sanitary workers being posted in the common areas is as high as sanitary workers in patient care areas. In the patient care areas, in addition to sweeping, mopping and cleaning toilets two times per day, the sanitary workers also need to give patient care activities such as transporting the patients to the diagnostic centers, giving bath to the prolonged bed ridden patients, cleaning the faeces of the patients, preparing the bed for the newly admitting patients and assisting nursing employees.

The important point to be discussed here is that the factor associated with heavy workload: manpower strength and technological support. Depending upon the manpower of the hospital, the numbers of the sanitary workers are devoted to the common areas: either one or two. Usually, since there are no patient care activities in the general areas, usually two sanitary workers are posted. In some hospitals, sanitary workers posted at the general areas also look after gardening work, which adds significant workload to them. In most of the hospitals, if any sanitary worker is either on leave is absent from the duty in the patient care areas, normally sanitary worker from the common area is shifted to the patient care area. Thus, when one sanitary worker is shifted from the common area, the remaining one employee need to perform the work of two employees, which commonly enhances her or his workload. At the same time, if one employee of common area is absent or avail leave, her or his place is not replaced with another employee by the supervisors. Usually, employee absenteeism is high in the housekeeping department and hence the sanitary worker being posted in the common areas need to work alone most of the time. Since one employee works in the common area, most of the time he or she has to work without any rest because of the heavy workload. Moreover, the supervisors and managers of the housekeeping department lack in motivation skills due to their lack of professional qualification, and hence, the employees who work, most of the time, alone in their department do not get any motivation, which itself enhances their work burden mentally. Therefore, the housekeeping manager should ensure that both enough manpower is available in the department and employees are regular to the duty without absent. The housekeeping supervisor should not treat the housekeeping employee working in the common areas without importance; instead, they should treat them as equal as employees in patient care areas.

### **Poorly designed layout**

Layout of the infrastructure is closely associated with posture and movements of the employees. The scientifically designed and built organizations cause less movement, avoid unnecessary bending of the body and assist to maintain a good postural condition to the body. On the other hand, poorly designed building, without scientific nature, would cause: excessive walking movements, bending activities and poor postures. Unlike other categories of employees, the work of sanitary workers is closely and largely associated with design of the building. The more poorly designed layout of the building, higher the movement of the sanitary workers. Besides routine cleaning and mopping activities, other important tasks of the sanitary workers: cleaning the desks, clearing the dusts and fans, and washing the utensils used in the department. Generally, the administrative departments are designed with lot of small divisions (partitions)

for various categories of the employees; in some hospitals, one entire floor is allocated for administrative functions, where the offices for all top and middle level managers and chairman and vice chairman exist. As far as administrative departments are concerned, although there is no patient care activities involved, the work of the sanitary workers are manifold: cleaning the toilet room once an hour in some hospitals or four or five times in some hospitals; washing the utensils such as tea cup and plates because the visitors from both inside and outside of the organization to the administrative block are huge. Although these are routine and common duties of sanitary workers in all organizations, those who work in administrative departments have lot of movements because higher officials are visited frequently and all of them have to be served tea or coffee, which enhance their workload when sanitary workers do these works besides their routine sweeping, mopping and other housekeeping works.

Majority of the respondents have strongly agreed that, 'poorly designed layout of the hospital' is associated with heavy workload of sanitary workers. As far as study area is concerned, very few hospitals, which were recently built, have well-planned structure facility, and many hospitals are not. Layout of the emergency department, intensive care unit, operation theatre and other diagnostic departments are complexly built in some hospitals. For instance; in some hospitals the intensive care unit remain next to the emergency department, but in some hospitals the distance between intensive care unit and emergency department is long; and in this case, the housekeeping employees need to transfer the patients from one department to another department and it consumes much time. Normally, although sanitary workers are separately appointed for these emergency department, operation theatre and intensive care units, in addition to their routine cleaning and mopping activities, when they perform these transfer and other activities of patient related, their mobility (movements) gets increased especially when the layout of the structure is complex and different departments are located at different places without close connection structurally. Moreover, in some hospitals, samples of urine and stools of the inpatients are passed to the diagnostic departments through the sanitary workers who are posted in that particular department; and therefore when structurally the diagnostic departments such as blood laboratory is far from the patients' wards (departments where inpatients are admitted), the movements of sanitary workers between these two departments are huge; and in some days many times they have to go to the laboratory department from the patient's ward because when different specialists come to check the in-patients, they may refer the patients to the laboratory. As transporting blood samples and urine samples, the sanitary workers need to transport the patients from inpatient wards and outpatient wards to the diagnostic departments such as X-ray, ultrasound and CT and MRI scans; similarly, sanitary workers need to transport the patients from emergency departments and patient care wards to intensive care units and operation theatre, dialysis unit, lithotripsy and catheterization departments according to the requirements with the help of wheel chair and stretcher. When these departments are far from the departments, where from the patients are transported, the movements of the sanitary workers would be huge. In some hospitals, the stretchers and wheel chair are limited; and therefore two wards need to share one stretcher and wheel chair, and in these cases, the movements and mobility of the sanitary workers are very huge, because they have to go to the department where the stretcher and wheel chair exist and bring them to the department and then transport the patients to the place to be transported. Some hospitals do not have lift facilities and in these hospitals sanitary workers have to transport the patient through the ramp; and in this case, the movements of the sanitary workers increase hugely. Thus, the frequent and increased amount

of movements of the sanitary workers would increase their workload further. Thus, in the hospitals where the layout has been poorly designed, the hospital management should strengthen the facilities such as enhancing the numbers of stretchers and wheel chairs; and increasing the numbers of employees; and also streamlining the systems of the hospitals.

### **Lack of technical support to transport garbage and disposal wastes**

Technology is largely associated with workload of the employees without respect of type of employees, and it reduces the workload of the employees and gets them productive and motivated. More the technical support the employees receive from the organization, higher the satisfaction of the employees. On the contrary, if employees are not provided enough technical support, they not only commit mistakes in their work, but also they fall in sick frequently, which would lead to the absenteeism of the employees. Since sanitary workers' nature of work is completely physical oriented, if they are provided enough material for sweeping, mopping and other activities, definitely their work would be perfect and they would also feel comfortable and easier.

Majority of the respondents' response have fallen under the response of 'strongly agreed' to the question, 'lack of technical support to transport the wastes to the disposal points'; and during discussion majority of the respondents reported: per day minimum two times they collect the wastes from the concerned departments where they work and transport to the disposal point. They also said: two sanitary workers join together and drag or lift the wastes up to the disposal point of wastes. As far as study area is concerned, most of the hospitals are still following traditional method of cleaning and mopping; they have not transformed to the latest cleaning methods. In very few hospitals, vacuum cleaner and mechanical squeeze mop can be seen being used, and in most of the hospitals they are not, and hence, sanitary workers have to do the work physically. In the hospital industry, the sanitary workers, in addition to cleaning and mopping of floors, toilets, rooms and general areas, they also need to give care to the patients. Therefore, when sanitary workers perform all these works physically under the condition of lack of manpower, fundamentally their workload increases. In most of the hospitals, the sanitary workers are not given even movable mop buckets in which the sanitary workers can twist and squeeze the mop; and hence, they lift and carry the water bucket and need to squeeze the mop by hands. When they do these works: lifting and carrying the water buckets to all places to be cleaned and repeatedly squeeze the mop sponge, definitely it would be the lot of work for them. Moreover, most of the hospitals do not provide hand gloves, face masks and shoes sanitary workers, and hence they do all these works (squeezing the mop with close approach with hands which pushes them to inhale the dusts and smell from the water) without safety devices. These activities not only enhance their workload, but also affect their health dramatically.

Transporting the wastes (medical, plastic and other wastes) is the primary duty of sanitary workers. Depending upon the volume of patients, the volume of wastes accumulated varies. In all hospitals, depending upon the volume of patients, the wastes accumulated are transported to the disposal point inside the hospital, where the wastes are carried out by the government or private organizations to be disposed. Different hospitals use different transport vehicles to transport the wastes depending upon the size of the hospital and management style of the organization. Usually, three wheelers auto-rickshaw operated manually, electric vehicles, container carrier system which either can be pulled or pushed with wheel support, and

compaction vehicles are used in the hospitals to transport the wastes from the place of origin to the disposal point. In most of the hospitals in the study area, sanitary workers manually transport the waste boxes. Markedly few hospitals have some equipment such as manually pushing and pulling vehicles to transport the wastes within the hospitals; some hospitals use wheel chair of the patients to carry the wastes. Depending upon the volume of the wastes, either one person or two sanitary workers join together and shift the wastes to the disposal point by lifting and carrying the waste disposal (container) pins in hands. This is really an additional workload to sanitary workers, and it causes them to undergo sick, because when they everyday carry the heavy weight two or three times for long distance through steps (in case if lift facility is not available) they spend too much energy and use their joints too much, which not only get them tired and cause pains in joints and general body pain and push them to absent from the work in the following days. Thus, in order to avoid excessive workload arising as a result of lack of technical support to handle waste disposal, the management should concentrate on mechanizing the department or appointing sufficient manpower to manage the extra works.

#### **Absence of dedicated break areas and dress changing room**

A dedicated separate break areas for both male and female employees to rest during break times are necessary to freshen up for the employees, because in the health care field the employees need to be standing most of the time. Since sanitary workers' work is fully physical oriented and throughout the day they stand, walk and bend, all their joints function restless; and hence, they need little rest in between the time to refresh them and stretch their muscle and relax their joints in order to enable them to continue their work further. The works they continue without rest will not only make the body tired soon, but also give the employees the thought of high workload. Now a day, all the industries including health care pay high attention to give break areas to their employees in order to comply with labour laws, but very few organizations give importance to arrange break areas for their sanitary workers; and most of the organizations do not; and in these organizations, sanitary workers share the rest areas of the other category employees.

Majority of the respondents have strongly agreed that, the factor, 'absence of dedicated break areas and dress changing room' is associated with heavy workload. When interviewed, majority of them reported that they do not have separate break areas for sanitary workers and they need to use break areas of other departments' employees with lot of challenges. In the study area, some big hospitals have given common break areas with tables, chairs and newspapers; very few hospitals have given a small room with or without chair for their sanitary workers, but most of the hospitals do not. The sanitary workers in the study area mostly share the rest room of the other category employees such as nurses, laboratory technicians, receptionists, and other female paramedical and nonmedical category of the employees. Thus, since they share the rest room of the other category of employees, most of the time they do not get the space to sit and rest comfortably; and most of the time they sit on the floor and lie down on the floor bending their knees due to lack of space. Most of the time, they sit outside the room till other category of employees come out of the room after their rest hours; thus, their break hours do not give them a fruitful result. Most of the time, they continue their work without taking enough physical rest.



Since the hospitals neither give importance to the physical rest of the sanitary workers nor give any proper arrangement to use their break hours usefully, they actually sit on the steps or outside the hospitals. If they lie down for a while, definitely it will give them some relaxation, but since they are able to just sit they neither rest nor relax completely. Since, in the study area, the working hour is long and there is no proper support of technology, when the sanitary workers need to do physical work throughout the day without enough rest to their physique, definitely, their work becomes a big burden to them and continuous work without rest itself become heavy workload although sometimes the works are lighter. Since most of the hospitals have not set separate rest areas for the sanitary workers, in some hospitals, sanitary workers set a resting area for them by themselves by hiding some space in the steps or under the steps, and they take some rest in those areas during their break. The reason why the sanitary workers set up a separate rest room for them by themselves is that actually caste discrimination is still highly prevalent in the study area. Ninety nine percentage of sanitary workers come from the downtrodden community in India; and in the hospital industries also, other category of employees see the sanitary workers inferiorly and they neither like the sanitary workers to join them in the rest area nor have lunch with them. Normally, in some hospitals, sanitary workers who are not assertive do not enter into the rest room, and hence, they wait outside the rest room till other category of the employees finish their resting time; or they set their own rest room in some places which are unused by the hospital. Some hospitals do not allow it, but some hospitals allow it understanding their challenges and physical work. In the hospitals where both sanitary workers are submissive and the management do not monitor the other category of employees, who do not allow the sanitary worker to use the common break areas, the sanitary workers do not take adequate rest; and hence, their work burden increases because they have to continue the physical work without enough rest.

Although some hospitals have given break areas for their employees, that break areas are not furnished well; and some hospitals have, for the name sake, have arranged break area with or without table and chairs. Table and chairs are not sufficient for the number of the employees; and the hospital management do not maintain right schedule for lunch and break for their employees; and hence, most of the time employees of different department meet in the break area at the same time. As a result of this, break area is always crowded most of the time all days; and hence, the sanitary workers do not get place inside the break area room. Due to this, they do not take enough rest either by sitting or lying down; and thereby they continue the work without taking enough rest which itself cause their work double. Thus, inadequate and improper break area is associated with heavy workload of the sanitary workers, the hospital management should provide a separate break area for the sanitary workers understanding their physical work and need of adequate physical rest and relaxation.

#### **Not allowed to use the lift; and need to use the steps compulsorily**

Steps, ramps and lift facilities are largely associated with day to day life of the employees of all categories. Although they are structural related factors of the hospital, they are big part of the physical working environment of an organization, and play a major part in deciding the workload of the employees depending on how the employees use them or are allowed to use them. Some hospitals do not have lift facilities; and although lift facilities are available, some hospitals do not allow their employees to use it due to the heavy loss of electricity expenses. Multi-speciality hospitals have two to five floors depending upon the size and speciality of the

hospitals. Most hospitals have minimum two floors for patients' service and one or two floors for administrative and accommodation purposes. In some hospitals, lift and ramp facilities have been made up to the floor of patients' related areas, and steps facilities are given for administrative and accommodation areas. On the other hand, some hospitals have both lift, ramp and also steps facilities for all the floors.

Majority of the respondents have strongly agreed that the factor, 'not allowed to use the lift, and need to use the steps compulsorily' as associated with heavy workload. In the study area, some hospitals do not allow their employees to use the lift facilities; and lift facilities are available only for the patients and medical personnel. And, the employees working in these hospitals have to undergo huge strain since all medical and paramedical employees cannot sit and work; and their nature of work consists of walking and standing. On the other hand, comparatively, the non-medical employees do the work in sitting posture and their movements such as walking and standing are less than medical and non-medical employees. Among the non-medical employees, sanitary workers do all the work in standing and walking positions. Although sanitary workers are posted in one place (ward), their nature of work get them to go to all floors and areas. For instance, after their cleaning and mopping work, they have to transport the wastes to the disposal point which is actually located at the ground floor; and therefore those who work on the first and above floors have to use steps or ramps to transport the wastes. In these cases, if the lift is not allowed their workload becomes high.

With regard to non-work related, since the employees are not allowed to use lift machine, all employees need to use steps or ramp to go to rest room which, in most of the hospitals, are normally located at the ground floor and at the corner. Normally, an employee go to the bathroom at least minimum three to four times in a day, and when they have to use steps and ramp, their movements become huge because most of the hospitals do not have separate rest rooms for the employees in each floor; and hence, they have to use the common rest room. As far as sanitary workers are concerned, when the walking movements they use to go to the rest room in addition to the movements they make towards their work, their movements become double. Other employees' walking movements related to the work are less when compared to sanitary workers.

Some hospitals use a particular floor especially top floor or underground floor as a storage room for medical records, storage rooms for the purchasing department and pharmacy department. Although the housekeeping employees do not have any role with these departments, whenever various medical, non-medical and para-medical departments need to transport the items to and from the storage department, the concerned department's manager use assistance of sanitary workers. Although these are not the works of the sanitary workers as per their job description, they are forced to do all these works without any monetary benefits. Since the lift is not allowed to be used by the sanitary workers, they have to carry all these materials (such as medical records, materials sent by the purchasing departments to various departments and pharmacy medicines) through the steps by walk, and in most of the hospitals ramp facilities are not available for the floors which are not patient care area related. Although sanitary workers are allowed to use lift facilities, when sanitary workers transport the materials from various departments to the storage departments and from the storage departments to various departments, their workload increases because in housekeeping departments of most of the hospitals in the study area, lack of manpower highly exist; and therefore, these works forcefully

allocated to them would definitely be the extra burden both physically and mentally; and hence they remain as the heavy workload for them.

Similarly, in some hospitals, the rest rooms for the medical personnel is located on the top floors and in most of the hospitals the administrative block is located either on the underground floor or top (last) floors. Medical personnel usually use the sanitary workers for their personal works such as buying tea, coffee, lunch from the hotel either inside or outside the hospital. Although these works are not part of their work, they, due to their illiteracy and submissiveness and communal background, carryout these works without denial; and these work adds up with their routine work and causes more movements through the steps and remain the heavy workload for them.

### **Absence of accommodation facilities to stay**

Accommodation facilities (hostel) occupy a crucial role in deciding rest of employees, which further determine the quality of work in the next working day. Hostels prevent the employees from unnecessary long travel every day and provide them a deep relaxation especially for those who works for long working hours and two shift work system. But, the problem is that sanitary workers are not given accommodation as other category of employees enjoys. Mostly, sanitary workers come from the local communities which are around or close to the hospitals areas, and few employees come from far distance. Moreover, in the housekeeping department, few sanitary workers are unmarried. Although they need hostel facilities, they are not given; and hence they go to the work as a day scholar.

Majority of the respondents have strongly agreed that absence of accommodation facilities is associated with heavy workload of the employees. In the discussion, majority of the respondents reported: 'hospitals do not provide hostel facilities to stay on monthly basis or even for one day period during emergency situations'. Due to high level of absenteeism and lack of manpower, frequently sanitary workers need to extend their duty, and hence they need to stay at hospital. During those times, they use the patients' bathroom as their convenience area and take shower in there, and rest their body just sitting here and there in the hospital without even sleeping for a little time and continue their physical work. Sometimes, during emergency situations, if sanitary workers need to work extra hours, they do not have any place to stay. Although there is free space, they are not allowed to stay at the hostel like how other category of employees do. Sanitary workers just sleep in the hospital beside any steps or any other place where they can rest their body. Hospitals neither provide them a separate and exclusive accommodation facilities (hostel) for sanitary workers, and nor are concerned about their stay. Due to these reasons, they undergo to the situation of sexual exploitation by males because of their lower community background, illiteracy and submissiveness. These kinds of denial and lack of concerns of the hospitals actually get sanitary workers restless mentally and cause them undue stress. These sort of mental stress and restless work increase their mental work burden, which impact on their actual work. Because of denial or absence of hostel facilities for the sanitary workers, they are put in compulsory situation of travelling every day. Those who live close to the hospital premises or reachable distance, do not have any issues if they are not provided hostel facilities. But, for those who go to the duty from far distance, the absence of hostel facility remain a major burden because they spend a significant amount of energy in travel and then when they continue their work they become tired very soon, which affect their

work. And, especially, when they continue their work without adequate physical work, definitely their workload become double mentally. The denial and absence of hostel facilities majorly affect unmarried people. Despite strong and no family commitments as married people, when they unnecessarily travel every day long distance, their body gets tired, which also impact on their work and health. Hence, in order to neutralize the heavy workload and promote the rest and health of sanitary workers, the hospitals should provide them a proper hostel facilities for those who are in need considering them as important employees as same as how the hospitals do to other category of employees.

#### **Absence of convenience facilities: drinking water and separate**

Proper convenience facilities are crucially needed for all employees to facilitate their work in the workplace. Large numbers of people, now a day, are suffered with diabetes mellitus; and hence, in most of the organizations, employees above forty years of age frequently go to the convenience, and despite no diabetes mellitus, normally a man goes to bathroom three to four times per day. As far as hospital is concerned, some of the employees work in the intensive care unit which is fully air-conditioned; and hence they go to bath-room many times than other employees do because of the chillness in work environment. Similarly, sanitary workers consume large volume of water than other employees because of their physical nature of work; and hence, they frequently go to bathroom for urination. Under these conditions of employees, if employees are not provided with enough convenience (bathroom) facilities, and they are forced to use the common rest room which customers and all category of employees commonly use, they have to walk every time to the common rest room and need to wait to use it. This kinds of increased walking and waiting time would get added with their workload causing their workload high.

Majority of the respondents have strongly agreed that the factor, ‘absence of convenience facilities: drinking water and separate toilet’ is associated with heavy workload for them’. When interviewed, majority of them reported that they struggled a lot for drinking water and to use toilet rooms because of lack of enough toilet rooms. In the study area, in most of the hospitals, there are two or three bathrooms available for all women employees irrespective of types of employees; and hence, all employees compulsorily have to use those bathrooms because male employees can go to outside if they are abreast, but it is not possible for women employees. Moreover, the bathroom in most of the hospitals is located at the ground floor, and the employees working at the first or second floor need to walk down either through steps or lift to the bathroom. When an employee need to go to the bathroom three or four times, it would be the unnecessary movements. Other category of employees in hospitals do work in sitting posture; and even if they have to happen to do some work in standing position (e.g. nurse, pharmacists and laboratory technicians) they do not stand for the long time and they can sit after their particular work. But, this is not possible for sanitary workers; they have to do all works physically in standing positions. Therefore, under this condition, if they happen to go to bathroom either from the first or second floors or from under-ground, their physical movements are increasing, which when added with their workload, their workload becomes high. Besides, the employees need to wait in the bathroom to use it in some big hospitals, which also get them spend lot of energy from their body.

The same situation is with drinking water facilities in many hospitals. Drinking water point is commonly located at the particular place, which employees of all departments have to use. In some organizations, the drinking water has been fixed in each floor; all employees in that floor can use that particular drinking water; and in this case, at least the movements of the employees are less. However, when employees of different departments need to use the drinking water placed at one place, the movements of the employees' increase, which, when added with their routine work additionally, would increase their workload. For administrative and medical category employees, they have separate drinking water facilities; however, other category of employees' especially non-medical category employees who do not have separate departments who sit and do the work do not have a separate drinking water facilities. Especially, sanitary workers do not have a separate drinking water facilities because their office is fully used by their managers; sanitary workers just go to the department to collect resources for their work and information whenever they need. In some hospitals, managers allow sanitary workers to drink water from the water point in the department, however, when the numbers of employees are huge, managers do not allow sanitary workers. Due to these reasons, sanitary workers go to different departments to fetch water when there is no water in the common water point. Thus, lack of drinking water facility is associated with heavy workload of sanitary workers. Therefore, hospital management should make necessary infrastructure that all employees can avail water easily whenever they are in need of.

#### **Absence of maternity related aids: crèche and feeding room**

A significant numbers of housekeeping employees in some hospitals are married and they have kids. As far as private organization is concerned, very few hospitals provide their employees maternity benefits: holidays with monetary benefits, however, most of the hospitals do not. Since all sanitary workers come from downtrodden community with low income level and are illiterate, they usually come to the work till last month of delivery of the child, and immediately after the delivery they begin coming to the job without taking enough rest. Some employees resign their job after the delivery because there is no people at home to take care of their child, and some employees leave their kids at their relatives or elder people at home and go to the job since hospitals do not provide crutch facilities. Very few hospitals which are large and run on corporate style have crutch facilities and have supportive staffs to run crutch center and give enough care to the kids. But, sanitary workers face discrimination, and mostly kids of educated employees are normally taken care of in those crèche.

During the pregnancy period, enough rest is paramount, but in most of the hospitals, sanitary workers are not given sufficient rest because the supervisors of the housekeeping department are not highly educated and are lacking leadership qualities. And hence, the supervisors of the housekeeping departments do not know how to get work from them in a nice way that it does not hurt them and their pregnancy. Moreover, in private hospitals no adequate concern is given to pregnant employees especially sanitary workers. Very few supervisors who are experienced in management field and aged understand the health challenges of pregnant ladies and their family financial issues, and show some leniency in work by allocating lighter workload and simple work areas and permitting them to take rest during the course of work.

Majority of the respondents have strongly agreed that, 'absence of maternity related aids: crèches and feeding room' is associated with heavy workload for them. When interviewed,

majority of them reported that they are not provided any maternity benefit (paid leave) and the hospitals do not have the facilities of crèche for their kids. In the study area, those who come to the work from nearby areas of the hospitals go to the house during lunch break and feed the children and then again to the work. However, this happens in very few hospitals and in most of the hospitals this privilege is not provided. The employees have to leave after the working hours, which itself is the mental burden for them. In very few hospitals, supervisors or managers of the housekeeping department allow the employees to leave from the job earlier before the closure of working hours considering their children, but in most of the hospitals they do not. Due to this reason, after the work, they have to rush home and feed the kid; and next day they have to go to the duty without any relaxation in the arrival time to the duty. Since already their body is weak and they have to continue the same level of workload without any changes in their work schedule and work assignments, their workload would be very heavy for them, especially because of their weak health. With weak health, when they climb the steps and ramps, doing mopping, transporting the patients, and collecting and transporting hospital wastes, their work would remain hard for them. Thus, in order to get the sanitary workers work comfortably without stress, the supervisors should assign them lighter workload and enough rest understanding the facilities not provided to them from the hospital side and their financial conditions. Similarly, supervisors can give them some relaxations in their working hours: both arrival and exit time from the duty. In the same way, the hospitals can establish crutch facility for sanitary workers if numbers of employees are huge, which will definitely keep them free from stress and give them mental satisfaction and get them to concentrate on their work.

#### **No free lunch or no food with concession rate**

The nature of work of sanitary workers is fully physical oriented; and hence, they need to take enough food to enable them to perform their duties. However, their poverty level, family situations, low salary and illiteracy remain the big inhibitors of taking both sufficient and balanced diet. Hence, normally majority of sanitary workers in all hospitals are mal-nourished and still continue their work. Their family burden is also one of the main reasons for their ill health, because most of the sanitary workers have many kids at home because of their illiteracy; and hence, their household work is also huge; which impacts mainly on their health. Another reason is travel: a significant numbers of employees travel from far distance to the workplace because of living expenses within the city limit, which highly impacts on their health. Low salary also is one the reasons for their poor health. Most of the hospitals do not follow rules and policies of the government in offering salary to their employees; especially sanitary workers are paid low salary. Although there is a small positive changes in many hospitals in offering salary to the sanitary workers, the salary given to them is not enough when compared to their work and contribution. Long working hours and lack of manpower existing in many hospitals are also reasons for their ill health. Therefore, they need to consume sufficient food to effectively manage their heavy workload.

To the question, 'how not getting free lunch or no concession for food received from the hospital canteen, the response of majority of the respondents have fallen under: Strongly agree. In discussion, majority of them reported that they do not receive any food from canteen either at free of cost or concession rate. In the study area, most of the sanitary workers who go to the work from long distance leave from home earlier, and hence they cannot take food at home. They bring food to the workplace and have it from there. But, most of the time, they cannot

take food on time; they have to start the work as soon as they arrive at the workplace; and hence, they postpone their breakfast. Moreover, most of the sanitary workers cook only one time per day, especially at night, and take the same food in the morning and bring the same food to the workplace for lunch; therefore, they are already spoiled. Sometimes, they bring insufficient food for both breakfast and lunch, which is not enough for both times. Very few hospitals provide food on concession rate for their employees. Those employees who stay at hostel are given food on concession rate from the hospital which runs attached canteen. Other day-scholar employees are not given any concession for the food taken from hospital canteen; and hence, they have to take food with the same rate what patients pay to the food, which normally is expensive. Due to expensive rate, sanitary workers do not take food from the hospital canteen; sometimes they go outside the hospital and buy food from the road side food shops if they have money. However, most of the time, they do not take food despite hunger; they manage with tea. Their lack of knowledge about diet causes them not to think about the importance of balanced diet to their health, and hence they skip taking food sometimes, which leads them to develop ulcer and weaken their health.

The condition of night shift employees is worst, because if the employees arrive at the duty at 8.00 pm for night shift, they have to work till next day morning 9.00, which is more than 12 hours. Mostly some of the employees who come to the night shift take their food at home, but some employees bring food to the hospital and take it during the rest time. Even at the night shift, the employees do not get any food from the hospital at concession rate. Most of the hospitals close their canteen in the night, and hence, even if the sanitary workers feel hungry at night, they cannot have any food; and they have to continue their work in starving. In most of the hospitals, during night shift, sanitary workers are allocated to the departments in single digit which is not enough to manage the patients' ration in the department; and hence the workload of the employees remains high. Under this condition, if the employees need to perform their work with half-filled stomach or starving, definitely, mentally they feel their work remains heavy, which endangers their health condition; and they cannot concentrate on their work. In the same way, they have to wait to reach home to take their next food. As usual, they cannot exit from the duty on time most of the time because of late arrival of the opposite duty employees; and hence they cannot even take their next food in the morning on time, which also impacts on their health. Hence, the hospital management should provide, at least, one time food at free of cost as per the government norms or can offer a little concession to the sanitary workers for canteen food to enable them to concentrate on their work fully and work both physically and mentally healthy.

## **5. Recommendation and Conclusion**

### **Recommendation**

Based on the results of the study, the researcher presents the following recommendations to reduce the heavy workload of sanitary workers arising as a result of physical working environment and welfare facilities related factors:

- The hospitals should provide transport facility to travel at least within a city limit when the location of hospital is not accessible to the public transport to assist employees who come

from far distance. Transport allowance can also be provided to them to get them satisfied mentally and to get them to cope up with long working hours.

- In order to cover up the distance between waste originating points (place) and waste disposal point, the hospital should provide mechanical supports (e.g., a small pushing vehicle) to transport the wastes; and also sanitary workers should be provided technical devices (such as vacuum cleaner) to facilitate their cleaning work. Similarly, they should be allowed to use lift facility for work purposes.
- Adequate manpower should be employed in the housekeeping department to balance the work without increasing the workload on few employees; and the housekeeping manager should ensure that each department has sufficient numbers of employees according to the volume of works in the department; and also, the managers should allocate additional manpower if the department is large and complex in nature in terms of layout.
- Hospitals should provide accommodation (hostel) facilities for sanitary workers as equal as other category of employees, and provide a separate, dedicated rest areas to relax during their rest hours, and also the separate toilet and drinking water facilities for them realizing their physical work.
- Hospitals should provide sanitary workers maternity benefits (paid leave) and crèche facility as how they are given to other category of employees. The managers should be much concerned when assigning tasks to the pregnant employees. In the same way, hospitals should either provide a free lunch or offer food at concession rate at the canteen for sanitary workers.

### **Limitation of the study**

The study has the following limitations. The first limitation is the study area; number of hospitals and type of hospital: The study has focused on only Tirunelveli city, and not entire District. Besides, it has included limited leading private multi-speciality hospitals, and not all hospitals in the study area. And, it has not focused on single speciality hospitals, government hospitals, diagnostic centers and clinics. The second limitation of this study is sample size and sampling technique: The study has sampled only 80 respondents using both convenient and judgement sampling techniques which are non-probability sampling techniques. It has not used any probability sampling techniques. The third limitation of this study is the target respondents: The study has researched about sanitary worker (the non-medical category of employees); and it has not covered any other type of medical employees such as junior medical officers, medical consultants and surgeons; other non-medical category of employees such as cafeteria department employees, security guards, maintenance department employees, front office employees and other administrative employees; and paramedical category of employees such as nurses, pharmacists, laboratory technicians and radiographers. The fourth limitation of this study is variables analyzed in this study: The study has analyzed two variables namely physical working environment and welfare facilities related factors, and their association with heavy workload, but it has not focused on any other factors which are associated with heavy workload such as shift, working hours, professionalism, leadership, resources, role, compensation, and motivation. As a result of these limitations, caution is strongly required to generalize the results of this study to other category of employees, other type of hospitals, and study area, because physical working environment may be well structured or not; and similarly welfare facilities may be strong or weak in other hospitals in the study area, and hospitals in other areas in the same District, other Districts, entire state and entire country.



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### **Direction for future study**

This present study will serve as a strong base for future research studies in multiple ways. Firstly, future research can be undertaken with the same topic covering sanitary workers in all hospitals in the study area with large sample size and using probability sampling techniques; and also be extended to the entire District, other Districts, and entire State. Secondly, future research can be undertaken applying the same concept to different professionals in other sectors such as banking, insurance, hotel, education, transport and so on. Thirdly, comparative study can be undertaken as to how far the organization structure and management practice related factors causing heavy workload among sanitary workers in private multi-speciality hospitals differ from, and similar with sanitary workers of other type of hospitals such as single speciality hospitals, diagnostic centers, and government hospitals. Fourthly, Similarly, besides extending the same concept to other category of employees in the health care field such as other non-medical, medical and paramedical disciplines to know how far physical working environment and welfare facilities related factors have influenced their workload; the same concepts can be analyzed as a comparative study between disciplines, (between paramedical and medical, or paramedical and nonmedical category employees), district wise and state wise. Fifthly, future research can be undertaken administering other variables such as shift, working hours, professionalism, leadership, work-life imbalance, resources and, motivation as independent variables; and how far they are associated with heavy workload of not only sanitary workers, but also other category of employees in not only health care industry, but also other industries.

### **Conclusion**

This survey, quantitative and empirical based descriptive research analysed the perception of sanitary workers working in private multi-speciality hospitals in Tirunelveli city of Tamil Nadu, India towards various physical working environment and welfare facilities related factors causing heavy workload. In order to achieve this objective, the study has sampled 80 respondents using both convenience and judgement sampling techniques; and from the chosen respondents the primary data were collected using schedule method with the help of questionnaire (translating the questions in respondents' mother language, 'Tamil') along with interview. The secondary data were collected from journals, conference proceedings and government websites to add appropriate significance to the study. Percentage method administered to analyse both demographic characteristics of the study, and perception of the respondents towards physical working environment and welfare facilities related factors causing heavy workload has discovered that majority of the respondents strongly agreed that the factors: location of the hospital and absence of transport facilities by the hospital, distance between departments and garbage storage, lack of technical support to transport garbage and disposal wastes, not allowed to use the life and need to use the steps compulsorily, complex layout of both the departments and the entire hospital, and size of the hospital are associated with heavy workload under physical working environment related factors. Similarly, majority of the respondents have agreed that the factors: absence of accommodation facilities to stay, absence of dedicated break areas and dress changing room, absence of convenience facilities (drinking water and separate toilet), absence of maternity related aids (crèche and feeding room), and no free lunch or no food with concession rate under welfare facilities related factors. The study has recommended the hospitals that sanitary workers should be provided with the following facilities to reduce both their mental and physical work burden: transport facility,

transport allowances, technological support, accommodation, drinking water, toilet, separate rest area, maternity leave with salary and crèche. Besides, the management should appoint adequate manpower to avoid heavy workload accumulated on few employees, and also should provide leadership training to the managerial level employees to treat sanitary workers with humanity without bias. In sum, since sanitary workers are highly responsible for maintaining cleanliness of hospital environment, which is the primary deciding factor of patients' satisfaction and reputation of the organization, hospitals should pay high attention to provide them with rich and harmless working environment, and adequate welfare facilities to enhance their mental satisfaction and reduce both their physical and mental work burden.

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## Is everything all ‘right(s)’?

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### Abstract

Living as a human being from the first human to the present day has always brought more and more responsibility. Being human means having all the qualities that will ensure the care and safety of others. The word “human” has no gender when used as a simple meaning describing humanity. However, it is mentioned by making a gender distinction that it expresses cultural ideas. For human beings, gender is concerned with the way members of the two sexes—a man and a woman—are expected to perceive, evaluate, and behave towards the cultural things to which they belong.

In some cultures, gender roles are defined strictly and specifically, but in others they have an important degree or hierarchy in social life. There is a biological separation of the sexes in that men have more muscular body weight and the power to hunt, war and work on land, while women have responsibilities that are compatible with pregnancy, breastfeeding and childcare. Physically and biologically, gender roles can be easily understood. But it is not as simple as it seems. Culture regulates or directs the role of genders in the culture of society, especially in social life. Because the most important difference between the sexes is thought and learned through the socialization process in the society. Therefore, the roles and rights of women and men take place in the social structure of the society they belong to and can change society into society.

In some societies the roles of men and women can be rigidly defined, while in other roles and duties overlap. On the other hand, due to the physical and biological superiority of men, women do not have exactly equal opportunities in society like men. As a result, genders and their roles may be exposed to some discrimination and violations of rights against women in society. However, this is not because the female gender does not have more body weight and muscle strength. It is the result of not learning to live together in this world or forgetting to be human from the beginning of this world.

**Key words:** human, gender, culture, society, human rights

## **Globalization of the world economy and analysis of its consequences**

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### **Abstract**

The process of globalization today is inevitable and affects all aspects of people's social life. The main impetus for the emergence and spread of the globalization process was the social and international division of labor. So, we are witnessing a rapid increase in the interconnection and interdependence between countries.

The following observations can be noted, concerning the impact of the globalization process on the economies of countries:

- 1) The globalization process is inevitable and has both positive and negative consequences for the country's economy.
- 2) International trade is less defined by absolute and comparative advantages, and to a greater extent, the interests of global companies. While competition for scarce resources continues to grow and there is a range of negative consequences of the globalization process, the interdependence between countries is increasing and countries are interested in cooperation. No country can stand aside from this process, because the losses will be greater than the benefits.
- 3) The role of the state in the context of the globalization process is decreasing. It is becoming more and more difficult to pursue a monetary policy and influence the exchange rate, since it is difficult to distinguish between the real flow of goods and services (export-import) and the flow of goods and services transferred from one division of a transnational corporation to another. Similar to the export-import of capital, the real picture is not shown as global corporations use transfer prices.
- 4) On the other hand, countries that are trying to control the influence of TNCs on their economies and are trying to apply severe restrictions (in the currency, tax and other areas) - as a result, face capital outflow and the departure of TNCs to countries with a more favorable regime.

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5) The task of the state is to maintain a balance in regulating the activities of branches of global corporations on its territory. The main goal in this direction should be to make conditions for creating and consolidating the positive effects of globalization and minimizing the negative effects.

Thus, the process of globalization is very controversial. Strengthening the positive effects of globalization involves reducing transaction costs, setting priorities in the policy of supporting scientific and technical enterprises, creating favorable conditions for attracting investments to the country, and controlling the use of transfer prices by global companies.

Reducing the negative consequences of globalization involves the state acting as an intermediary, reconciling state interests with the interests of global corporations, reaching a compromise that allows mutual benefit. Despite the widespread point of view about the reduction of the role of the state, in our opinion, it still saves its strength, which lies in the need for a more flexible policy. So, some of its functions should be reoriented to the modern realities of interaction with global corporations in the world market. The search for a compromise between state interests and the interests of transnational companies is one of the main state functions.

Key words: globalization; positive and negative consequences of globalization; transnational corporations; anti-globalization movement; economies of scale; transfer price

## **Benchmarking fast fashion supply chains: Identifying enablers of operational excellence**

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### **Abstract**

Businesses regard benchmarking as a systematic method to develop strength and learn from the best. In supply chain management, benchmarking is crucial for evaluating its operations and improvement. This article explores the fast fashion supply chain and argues that it is the best practice across different industries. It identifies critical success factors of a fast fashion supply chain business model and its enablers through a comprehensive analysis. For example, sophisticated information systems enable the short lead times in the fast fashion business model, likewise how performance measures enable fast fashion brands to meet their customer requirements.

**Key words:** Benchmarking, Supply Chains, fast fashion, supply chain benchmarking



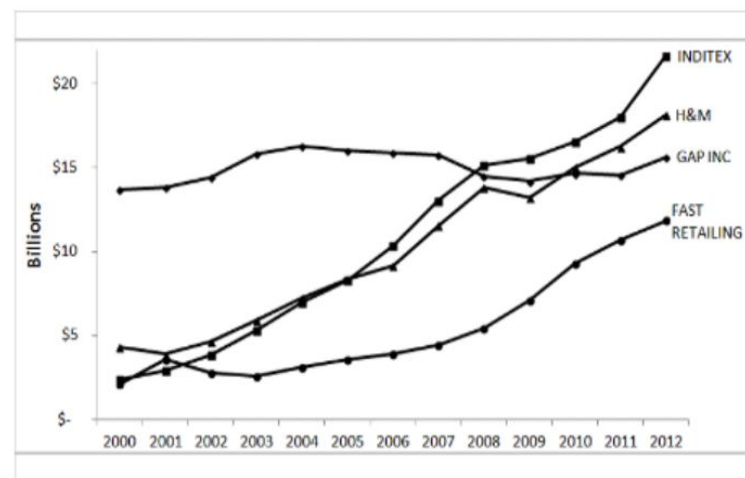
## **1. Supply chain benchmarking**

Benchmarking is the practice by companies to measure and assess their products and services against the “best in class” to create significant competitive advantages. Some elements of this practice are measurement, comparison, identification of best practices, implementation and improvement are key elements of the technique (Attiany, 2014). It facilitates companies to build an effective supply chain system. Such a system is crucial for meeting customer requirements (Khare et al., 2012). It also enables businesses to improve product specifications, operational performance, and management practice. Benchmarking may help them build resilient operations and cost competitiveness so they could identify potential areas of improvement (Suri, 2010). The following facts and statistics justify the significance of benchmarking in supply chain management (Anand et al., 2008):

- In the early 1990s, 65% of the Fortune 1000 organizations used benchmarking as a management tool to gain competitive advantage.
- 50% of the French 1000 companies use benchmarking on a regular basis, and 80% of them consider it as an effective tool of change.
- The competitor-focused Benchmarking tool is still widely used and is in the list of the 10 top management tools based on usage and one of the 5 tools that remain from 1993 (Rigby et al., 2018).
- In 2017, managers used the following top 5 management tools in descending order of use: Strategic Planning, Customer Relationship Management, Benchmarking, Advanced Analytics, Supply Chain Management (Rigby et al., 2018).
- Benchmarking has relevance in most sectors of industry (e.g. manufacturing, healthcare services, insurance, financial services, construction, banking, government, airport services, and education).

## **2. Operational excellence in fast fashion**

The fast fashion retail market has undergone significant improvement over the past decade. As figure 1 shows, stores like Hennes and Mauritz and Zara have become the most prominent apparel retailers worldwide (Caro et al., 2014).



**Figure 1: apparel retailer revenue 2000-2012**

Source: Caro et al. (2015).

Inditex which owns eight fast fashion brands like Zara, Pull & Bear, and Inditex.com makes it into the Gartner Supply Chain Top 25 list due to its unprecedented levels of agility and flexibility. It also understands customer value alongside efficient logistics, invests in technology to foster resilience, produces innovations, and performs well at environmental, social, and corporate governance (Gartner, 2021).

Three elements shape the fast fashion business model (Caro et al., 2015):

- quick response (short lead times: the amount of time spent between a customer order and its delivery)
- frequent assortment changes
- fashionable designs at affordable prices

These elements show that fast fashion retailers rely on highly responsive supply chains (Caro et al., 2015). These chains focus on strategies that allow for responsiveness and flexibility to the changing needs of customers (Camargo et al., 2020).

### **3. Potential areas of benchmarking**

The Fast fashion business model offers many lessons to learn, such as its speed it relies upon, its flexibility in meeting customer's expectations, and the capability of its retailers to keep up-to-date. This study identifies the critical factors that contribute to the success of fast fashion retailers to offer a comprehensive understanding on how other apparel companies can be as successful.

#### **a. Information systems**

Fast fashion retailers use sophisticated information systems that enable short lead times. Such systems allow for frequent inventory monitoring and replenishment and facilitate distribution.

For example, Zara continuously monitors its inventory levels to balance supply and demand. The information systems also support in-depth market research (Cachon et al., 2011). The company's information system can link the entire procurement, design, production, distribution, and sales data. It also performs various tasks, from monitoring inventory of raw materials to managing lists of design, fabrics, and resource allocation. The system enables Zara to respond quickly to market changes and manage its entire operations, production, and distribution (Chunling, 2020). In this regard, a preferable information system strategy helps businesses monitor their day-to-day operations to ensure their efficiency. A flexible system would enable businesses to monitor their products and flexibly adapt to sudden market changes (Qrunfleh et al., 2012).

#### **b. Performance measures**

Suitable performance indexes become another component of a fast fashion supply chain's success. Fast fashion retailers prefer time-based performance measures such as reducing production cycles and time-to-market or perfect order fulfilment (Moretta Tartaglione et al., 2013). Zara has designed its performance measurements and operational procedures to facilitate and encourage the transfer of information (Klammer, 2009). Some examples of its critical performance measures would be their sales forecast accuracy, sales growth rate, and year-over-year improvement rate in daily tasks. For instance, they would compare the sales volume on the third Thursday in June 2022 and the volume on the third Thursday in June 2021 (Ferdows et al., 2003).

#### **c. Collaborative Relationships**

Collaboration between parts of a supply chain system has become something prevalent nowadays. Retailers may work with fewer partners to ensure rapid responsiveness. They may also opt to partner with many suppliers to meet various demands. Some relationships between suppliers are stronger because they aim to avoid delays within their supply chain system (Barnes et al., 2006). Such relationships may benefit all supply chain members. Furthermore, ethics in collaboration among suppliers have gained more significance during the global pandemic. A study shows that fast fashion retail chains have invested a lot of effort in building supplier relationships during the pandemic and have, so to speak, switched more strongly from pure transaction to cooperation strategies (Dewalska-Opitek et al., 2021).

The Quick Response (QR) technique has maintained a central role in the apparel industry over the past couple of decades (MacCarthy et al., 2009). Fast fashion retailers commonly use the technique to adapt to new trends within a limited timeframe. Thus, it is safe to say that QR has been synonymous with the apparel industry chain (Aggour et al., 2018). A partnership or cooperation is essential in the technique implementation (Corbishley et al., 2021). This technique relies on prominent implementation of integrated relationships between supply chain members and appropriate information technology systems. The QR technique implementation requires the cooperation from all supply chain members and the trust among themselves (Aggour et al., 2018).

#### **4. Conclusion**

This study identifies as the best practice due to the success of its business model implementation. Three factors determine the success of the model: information systems, performance measures, and collaborative relationships. These three critical success factors apply not only in the fast fashion industry but also other industries.

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## Cultural values in the formation of economic relations

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### Abstract

The paper identifies the role of culture in the organization of human economic activity, clarifies the cultural context of the relationship between the concepts of ensuring the existence and economics, the study the mechanism and tools of the regulatory influence of culture on the process of organizing human economic activity during the evolution of historical forms of development. **The methodology of the study** is dialectical, logical-historical, comparative economics, institutional, and complementary methods. **The scientific novelty of the work** deals with broadening the perceptions of the culture's effects on the evolution of management forms. **Results.** The formation of the model of glamorous capitalism reflects the growth of the role and significance of the cultural values in the course of the formation, development, and heterogenization of modern forms of economic and post-economic relations.

**Keywords:** culture, economic culture, economy, institution, values.

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## 1. Introduction

The devastating consequences of transformational transformations in the post-Soviet space have clearly demonstrated the limitations and shortcomings of the neoclassical conception of the economic man. The range of methods used in the study of economic development is expanding. The institutional direction of economic research is being developed. The achievements of other sciences are increasingly involved. A number of related scientific disciplines are being formed. The study of the peculiarities of economic behavior involves the achievements of such sciences as a philosophy of economy, social economics, economic sociology, institutional economics, economic psychology, and behavioral economics. The culturological approach has a significant potential for identifying and studying the factors that stimulate or inhibit economic growth.

**Analysis of recent research and publications.** Criticism of the mainstream modern economic theory has led to the appearance of a significant number of works devoted to the study of the influence of cultural factors on the organization of human economic activity. Among the works that caused a wide resonance can be called a collective study prepared under the direction of L. Harrison and S. Huntington "Culture matters. How values contribute to social progress ", L. Harrison's personal works "Who prospers. How cultural values contribute to success in culture and politics ", "The main truth of liberalism. How politics can change the culture and save it from itself ", the collective monograph "Multifaceted globalization. Cultural Diversity in the Modern World " edited by P. Berger and S. Huntington, comparative studies of cultures by R. Inglehart, F. Trompenaars, G. Hofstede, S. Schwartz, F. Fukuyama. Much attention is paid to the problems of organizing cross-cultural interaction. It is worth noting the works of R. Gesteland, R. Lewis, G. Triandis, N. Holden, A. Putting, M. Seagall, and P. Dasen. This type of publication has become widespread as practical recommendations-guides on the organization of interaction with representatives of other cultures. Among this type of work are the works of M. Bosrock, T. Morrison, and W. Conway. A special place among the studies of the influence of culture on human economic activity is occupied by a thorough review by S. Begelsdeik and R. Maseland "Culture in economics: history, methodological reflections and areas of practical application in modern times." Attention to the history and methodology of relevant research is combined with the analysis of areas of the practical application of knowledge about the impact of cultural features on entrepreneurship, corporate governance, international business, and the distance of trust.

**Identify previously unresolved parts of the overall problem.** Researchers focus on the comparison of economic cultures, and the organization of cross-cultural interaction. However, the issues related to the theoretical substantiation of the influence of the cultural context on the evolution of economic forms remain out of sight, which acquires special significance both in the process of transformational transformations in the post-Soviet space and in the course of changes in the global economic system.

**The work** aims to identify the role of culture and cultural values in the organization of human economic activity, clarify the culturological context of the relationship between management and economics, and study the mechanism and tools of regulatory influence of culture on the organization of human economic activity in the evolution of forms of management. In the



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process of work dialectical logical-historical, comparative, institutional, and complementary analyses were used.

## 2. Literature Review

By culture, we mean a complex homeostatic system of non-biological nature, which contains the aggregate experience of species existence of man and provides the accumulation, reproduction, development, and use of this experience, in parallel with the reproduction of species of the man himself (Culturology, T. 1, c. 1042). It includes man-made artificial objects and orders, learned forms of human behavior and activity, knowledge, patterns of self-knowledge, and symbolic representation of the world around us. Culture performs the functions of adaptation, communication, integration, socialization of members of society, and preservation and inheritance of knowledge accumulated by society. Researchers distinguish cognitive, expressive, and evaluative components of culture, constructive (categories, scenarios, concepts, methods), and mainly regulatory (values, customs, norms) forms. Culture determines the features of relationships between people, social strategies used, style and lifestyle. It is for this reason that the study of culture acquires special significance in the context of the growing integration of the national economy into the world economy. It allows us to answer the question of why the elements of culture that have ensured the success of the most developed countries, inhibit the development of the lagging behind.

In the Cultural Economics approach Guiso, Sapienza, and Zingales (2006) consider the dependence on impatience and our respect for laws degree as a cultural phenomenon. All economic decisions have cultural components. The authors compound personal preferences, expectation formations, and perception of risk. Such an approach influences the essence of the majority of concepts analyzing the relationship between economics and culture. The economy and culture are inseparable (Nosova, 2020 a).

Important features of culture that determine the possibility of its transformation, borrowing, and transplantation of elements of other cultures are systemic integrity, synergy, body complexity, proportionality, expediency, ability to self-reproduction, and self-regulation (Lypov, 2011).

*The dialectical integrity* of culture is given by the presence of its two opposite but inseparable facets - material and spiritual. In turn, the very material side of human culture is dualistic in nature, because its carrier is a substance of natural origin, transformed by man in the process of life. It ensures the physical survival of society. But its very existence, reproduction in a usable form is impossible without the accumulation, transmission, and use of spiritual experience. After all, it concentrates knowledge about the world around us, ways to adapt to it, and the means of its transformation.

A special aspect of spiritual culture is the *values and norms of social interaction*. The complementarity of different elements of culture integrates it into a single whole. It provides the possibility of the existence of culture as a specific phenomenon that has emerged from the natural environment and performs reproductive and adaptive functions. Complementarity is determined by the evolutionary nature of the selection of its elements, which provides the possibility of including in it only those components that meet the objective needs, able to fit into it as integral components. This association ensures the acquisition of culture, as a holistic

systemic phenomenon, with new properties that are not reduced to the properties of its individual parts. Culture has such systemically complementary characteristics as multidimensionality, variety of possible forms of communication, multicriteria, diversity of elements, heterogeneity of circulating information, and variability of the state of structure and composition.

*The complementarity* of the elements of culture is ensured by the evolutionary selection of those options, the combination of which leads to improvement at the level of the system as a whole, and is not inherent in individual elements, the formation of integral properties, and qualities. Preservation of any element of culture in the process of evolutionary selection indicates its importance in the process of life support of the system. It can be manifested both directly in the functions they perform, and indirectly. This occurs when, for any reason, even at the cost of losing their primary functions, the element of culture acquires the significance of a catalyst for vital processes, the implementation of which without its participation is threatened.

*The dialectic of culture* as a holistic social phenomenon is manifested not only in the confrontation of its material and spiritual facets. *First*, the specifics of the physiology of human thinking are embodied in two opposite mechanisms of human orientation in the environment and their derivatives of two opposite types of cultural experience - rational-logical and emotional-sensory. As the presence of two complementary principles of information processing based on complementary principles of the brain is a prerequisite for the formation of human thinking, and the differentiation of types of cultural experience provides the formation of a holistic human culture. *Secondly*, it can be traced to the simultaneous existence in the subjective (reality of consciousness of a particular carrier of culture) and objective (social materialization of cultural experience) forms. The subjective form is inseparable from the objective, because, on the one hand, the very perception of personal phenomena of the world as cultural phenomena is impossible without prior socialization of the subject, their assimilation, and "objectification" of the achievements of human culture. On the other hand, the objectification of cultural experience is possible only as a result of combining cultural experience that exists in a subjective form. And it is manifested in the minds of specific actors. *Third*, the dialectic of the opposition of objective and subjective in human culture is the basis of another form of contradiction. Each cultural phenomenon has an independent existence. It is what distinguishes it from the boundless sea of other cultural phenomena. But independence is always limited by its inclusion in the world of culture (part/whole). It is defined by the form and functions performed by them. As part of the system, it is involved in a variety of connections and relationships, the complementarity of which is the starting point for the existence of any cultural phenomenon.

The dialectic of the relationship between the subjective and the objective in culture is embodied in value orientations and institutions as elements of culture, their formation from individual to specific and general. As a result of the formation and consolidation in the collective consciousness of the most effective forms of social interaction, they reflect the objective side of social relations. At the same time, the condition of their existence is the acceptance by specific individuals as subjective knowledge, the knowledge that is embodied in the daily activities of people. This is one of the differences between institutions and the norms and rules of peoples and civilizations that have long since departed from the historical arena.

The study of culture in the context of its impact on the organization of human activity, and social interaction, allows us to identify several levels of regulation (Table 1)

**Table 1. Regulators of social interaction and culture**

Level	Elements of regulation
<i>Unconscious</i>	needs ( <b>what move us</b> ), instincts, collective unconscious, archetypes, ethos values, ways of thinking ( <b>how we act</b> )
<i>Conscious</i>	needs, interests ( <b>what</b> ), knowledge, skills, thinking techniques ( <b>how</b> )
<i>Subconscious</i>	needs, values ( <b>what</b> ), thinking styles, skills ( <b>how</b> )
<i>Superconscious</i>	institutions, national, professional styles of thinking, the predominant value orientations of national cultures ( <b>what, how</b> ),

Tools for regulating human activity and interaction are divided into two groups and four levels. The first group includes those that act as a stimulus or motivator (what moves us), and the second – those that actually determine the order of activities (how we act). The two-way movement between conscious and superconscious levels of regulation is of key importance in the process of culture formation. It is connected, on the one hand, with the objectification in the public consciousness of individual subjective experience (formation of culture), and on the other – with the assimilation (subjectivization) by individuals in the process of socialization of objective cultural experience accumulated by previous generations. (inheritance of culture).

As a rule, institutionalization, consolidation as elements of culture, and certain algorithms of social interaction involve their mastery to the level of skill (subconscious), and automatic application in certain situations (Lypov, 2014). A person, guided by any norm of social interaction, as a rule, does not think about the norm itself. Moreover, most norms we learn involuntarily, following the behavior of others. Only a small part of the norms, usually related to professional activities, we learn through targeted training. And those, in the case of constant reproduction, as skills, are transferred to the subconscious level. Getting a person into a certain situation, the institutional context, which acts as a psychological trigger, triggers a corresponding institutionalized reaction. At the same time, the assimilation of such a rule means connecting a person to the supra-individual, social level of regulation. The paradox of the situation is that the fewer members of society are aware of the existence of a particular institution, and norms of behavior, the more effective it is. Effective institutions are institutions that fall into the realm of implicit, tacit knowledge. We know the norm so well, we follow it, that we have already “forgotten” what we know. We do it automatically. It is even more difficult to deal with the unconscious level. Instincts, collective archetypes, the collective unconscious – those elements of the nanoscale that form the basis of civilizational identity, its stability, and heredity. This level of regulation of human activity, influencing it, generally remains inaccessible to human consciousness. The bulk of cultural evolutionary models is human-centric and certain processes such as cumulative culture seen to be unique to humans (Creanza et al. 2017).

The initial prerequisite for the formation of national and cultural specifics of the organization of human economic activity is the material and technological environment. Peculiarities of its influence, remaining relatively stable and unchanged over thousands of years of the economic existence of human communities, have a decisive influence on the formation of the dominant style of thinking, social values, worldview, and through the institutions and institutions (Table 2).

The specificity of national cultures is laid down at the level of thinking styles (the priority of the left hemisphere, logical or right hemisphere spatial and figurative perception of the world – the unconscious). Types of mental activity determine the specifics of human perception and understanding of the surrounding reality. On the contrary, they themselves are due to this reality, the result of the long-term impact of the material and technological environment of human habitation. In the process of learning the individual learns many techniques for rationalizing mental activity (conscious). Sharpened to automatism, the level of experience, they become the basis of individual style of thinking (subconscious). However, this individualism, specifically, is limited to the context of the cultural experience of the social community to which a person belongs and determines the commonality of national, professional styles of thinking (universal, general, superconscious).

**Table 2. Business environment, thinking, economic values, and culture**

<b><i>Social properties of the material and technological environment:</i></b> Marginality/middle of the location; access to the sea, navigable rivers; the nature of borders; character, distance, partners; landscape; availability of reproducible and mineral resources; climate	
<i>Separation of use</i>	<i>Inseparability of use</i>
<b>Thinking styles</b>	
<i>The left hemisphere, logical</i>	<i>The right hemisphere, intuitive</i>
<b>Culture (by R. Benedict)</b>	
<i>Guilt</i>	<i>Shame</i>
<b>Cultural mentality (according to P. Sorokin)</b>	
<i>Sensual</i>	<i>Ideational</i>
<b>Values</b>	
<i>Ethnic, religious, ideological, legal, political, economic</i>	
<b>Social orientations of the value system (according to S. Kirdina)</b>	
<i>Subsidiarity of the Western Institutional Matrix, Religious Values of Protestantism</i>	<i>Communitarianism of the Eastern Institutional Matrix, Values of Traditional Religions</i>
<b>Predominant value orientations of national culture (according to G. Hofstede)</b>	
<i>Mostly individualism, a short distance of power, short-term orientation, positive attitude to uncertainty</i>	<i>Mostly collectivism, long distance of power, negative attitude to uncertainty, the priority of long-term orientation</i>

Culture can also affect behavior and outcomes through its effect on political preferences of individuals about what governments should do: for example, how much government should

interfere in economic life. Competition, market regulation, income redistribute, social security program, nationalization of certain industries and businesses relate to the government's regulation functions of economy (Guiso et al., 2006).

In the process of economic modernization, there is a transition from the dominance of the right-hemisphere spatial-image characteristic of traditional society to the left hemisphere, a logical type of thinking. If the first, mostly Eastern type of thinking, involves a holistic perception of the world based on an intuitive understanding of the relationships and relationships of its elements, the second, mostly Western type of thinking, involves modeling systematic relationships based on unconditional provisions. Features of the dominant type of thinking determine the specifics of perception of the world, its understanding, choice of goals, tools and social interaction, and national culture in general (Naisbitt, 2012).

The specificity of the dominant type of mental activity has a decisive influence on the formation of the national mentality. The national mentality is a set of generally accepted socio-political or ethnic community algorithms of cognitive (mental) activity, generally accepted socio-psychological concepts (ideas, characteristics, values) in the field of social interaction, and patterns of economic activity (institutions).

**R. Benedict** distinguishes the **culture of guilt and the culture of shame**. The culture of guilt – is a set of socio-ethical views, according to which a personal conscious attitude to others, behavior, and relationships with them are governed by internal moral norms and the threat of punishment for their violation. The culture of guilt is characteristic of Western societies. The origins are contained in the Christian worldview. In turn, the culture of shame is proposed to understand a set of socio-ethical beliefs, according to which a person's attitude to others, behavior, and relationships with them, consciously or unconsciously, are governed by attitudes about the place, responsibilities, and roles of man in the environment, responsibility in front of others, assimilated at a non-critical level in the process of socialization. This type of culture is characteristic of the peoples of the East (Benedict, 2006).

**P. Sorokin's** concept of sociocultural dynamics allows us to trace the connection between the peculiarities of the evolution of cultural mentality and the nature of economic activity in a given society, and the dynamics of their development in the process of historical evolution. The scientist distinguishes two oppositional (**active-sensual and ascetic-ideational**) and a number of intermediate (active-idealistic, idealistic, passive-sensual, cynical-sensual, pseudo-ideational) types of cultural mentality (Sorokin, 2000 ).

At the level of values, we also find a connection with the dominant style of thinking. The priority of a holistic, spatial, and figurative perception of the world – is an objective prerequisite for the dominance of collectivist values. The priority of the logical is individualistic.

**Religious values**, in particular, play a special role in shaping the specifics of national economic cultures and institutional systems. **Judaism and Christianity** aim at the transformation of the world, and individual responsibility for their destiny. **Islam** focuses on the transformation of the world, but human activity is limited by the precepts of the Qur'an. **Buddhism, Hinduism** - a departure from the material world through a focus on individual spiritual experiences while maintaining social obligations. **Confucianism** (honed to the level of the religious-philosophical system) - pragmatism based on adaptation to the world and ritualization of all aspects of life.

In fact, in the case of the evolution of religious worldview systems, we face a gradual heterogenization of worldview through a combination of two styles of thinking - Western, analytical, which separates man from the world and aims to actively transform it, and Eastern, intuitive, aimed at integrating man into the environment. and focused on following the "natural path". In this case, Islam, Hinduism, and Buddhism are intermediate, hybrid variants that include elements of both approaches.

Economic activities appear as elements of culture (Fig. 1).

**Ensuring the existence** - human activity aimed at ensuring the reproduction of their own existence as an individual and as part of society, the reproduction of society as a single social organism. **Culture of ensuring the existence** - part of the cultural heritage, which directly ensures the accumulation, preservation, use, and transmission from generation to generation of the most effective algorithms ensuring the existence activity - a form of activity that ensures continuous self-reproduction of society as a social organism. **A culture of ensuring existence** is a system of values, meanings, symbols, knowledge, traditions that provide motivation and regulation of human economic activity and determine the form of its implementation, and at the same time and its perception by society (Zarubina, 1998).

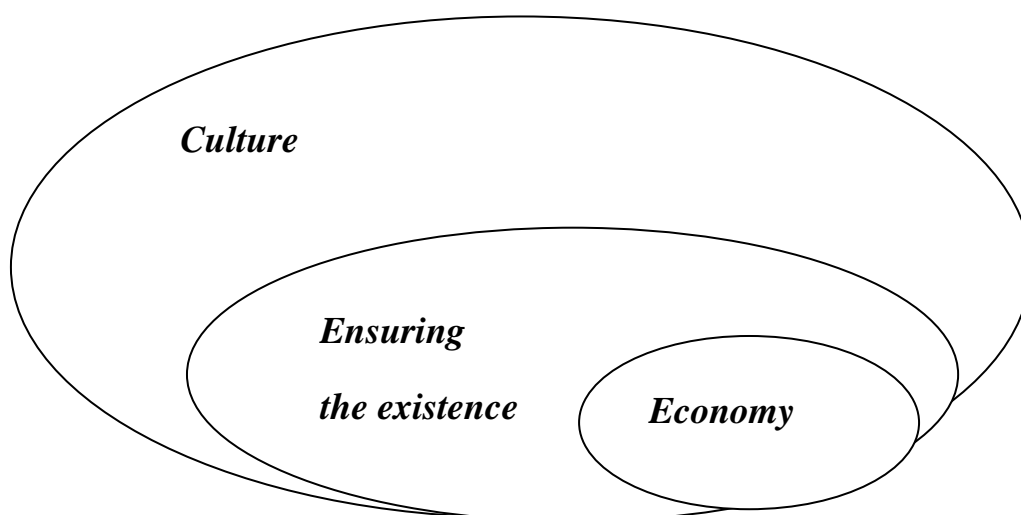


Fig. 1. Ensuring the existence and economy as elements of culture

**The economic form of ensuring existence** is not its only form. Moreover, even in developed countries the consolidation of the market, the economic form ensuring the existence as the dominant appears by historical standards a new phenomenon that has only relatively recently replaced **the natural form of ensuring the existence**. This process was started by the bourgeois revolutions in the Netherlands and England. Moreover, as early as the 1970s, the process of forming a new, **post-economic form of ensuring existence** began in developed countries.

In this case, the evolution of forms of ensuring existence is inextricably linked with the change of forms of economic culture. Complicating this process is the fact that the formation of a new form of ensuring existence does not mean the complete extinction of the old. The dominance of market relations of exchange between independent economic entities does not mean the

abandonment of reciprocal relations within households, redistribution within enterprises, and between households, enterprises, and the state. Accordingly, within the economic culture can be identified components inherent in the culture of natural, economic, and post-economic methods of ensuring existence. (Table 3).

Studies of the evolution of ensuring the existence of culture allow us to trace the changes in the basic cultural bases of motivation for the inclusion of the individual in the process of social reproduction. The distinction within the ensuring the existing culture of its varieties associated with specific forms of ensuring the existence allows supplementing the analytical tools for analyzing the interaction of ensuring the existing entities. To characterize the movement of goods in archaic societies (absolute dominance of the natural form of ensuring existence) K. Polanyi proposed the concept of reciprocity (reciprocal). It involves the movement of goods within a social network based on the relationship of reciprocity and symmetry (Polanyi, 1944, 2006).

Table 3. Evolution of forms of ensuring the existence of culture

	Forms of culture ensuring the existence			
	<i>Precedes economic</i>	<b>Economic</b>		<b>Post-economic</b>
Type of ensuring the existence	Natural	Economic		Post-economic
<i>Initial basis</i>	Pre values of the genus	Normative and legal institutions of ensuring the existence		The value system of the individual
<i>Nature of activity</i>	Labour, pre-employment activity,	Work	Creative work, entrepreneurship	Creativity
<i>Purpose of activity</i>	Survival of the genus	Survival of the individual, family Profit Self-actualization	Profit	Self-actualization
<i>Relation to the existing environment</i>	Man is a part of and obeys his laws	Use of existing environment	Man over and actively transforms it	Man - his part and interacts with him
<i>The nature of the needs of A. Maslow</i>	Lower level, survival	The trend toward social and personal	The dominance of economic forms of self-affirmation	Self-realization

Source: author's approach is based on the works of Polanyi, K. (2006), Creanze et al (2017), and Lypov (2014).

The tools of reciprocal relations include gifts and trata. The formation of the economic form of ensuring the existence was ensured by the allocation of exchange as the dominant form of economic interaction. His tools are buying and selling. However, within the economic model

of ensuring the existence on the periphery of economic life, reciprocal relations are preserved, and redistribution relations retain the importance as a fundamental factor in the social integration of the economic process within the state. Reciprocity is the basis of the movement of goods, primarily within households, and redistribution - between the state and economic entities. The formation of glamorous capitalism at the stage of transition to post-economic formation allows us to trace a kind of expansion of the tools of reciprocal relations in the new economic conditions directly into the sphere of economic relations. The heterogeneity of the institutional foundations of economic culture of individual forms of ensuring the existence is embodied in the intertwining of forms of movement of goods, inherent in both economic and natural, post-economic forms of ensuring the existence.

The peculiarity of spending as a form and tool for the formation of social relations is the expansion of the social and natural range of subjects of relations while preserving their personal content. *Tratta* is an instrument of establishing mutual obligations between the tribe and its top, friendly tribes, the natural forces surrounding man, and the integration of man into the wider social and natural environment; a tool to turn aggression into a competition in generosity, aimed at meeting the desires and needs of the partner, members of other communities and, through the establishment of mutual obligations, the formation of a social hierarchy.

The inclusion in the analysis of economic relations of such a tool as *tratta* allows a new approach to the study of the dialectic of economic goals. After all, if they focus on individualized production (K. Marx) / consumption, face a shortage of resources, directs the economic person to minimize costs, the focus on reproduction, continuous development of the human community as part of the universe (J. Bataille) is faced with the problem of infinitely recurring surplus resources and recycled through donation or *tratta* (Bataille, 1949).

The economic form of ensuring the existence, in the theoretical models of the mainstream modern economic theory, assumes the absolute dominance of exchange relations based on rational calculation. The combination of minimizing own costs with the desire to maximize profits finds its original basis in the reliance on the formalization and depersonalization of relations between economic entities. However, a whole layer of literature is devoted to the study of this economic phenomenon, which exists only in the pages of economic treatises. Economists, sociologists, psychologists, anthropologists, and philosophers turn to his research.

The evolution of the cultural and ethical foundations of capitalism is traced by W. Zombart. "The first forms of capitalist enterprise, - says the scientist, - are these robbery campaigns [residents of Italian coastal cities - VL]" (Zombart, 2005).

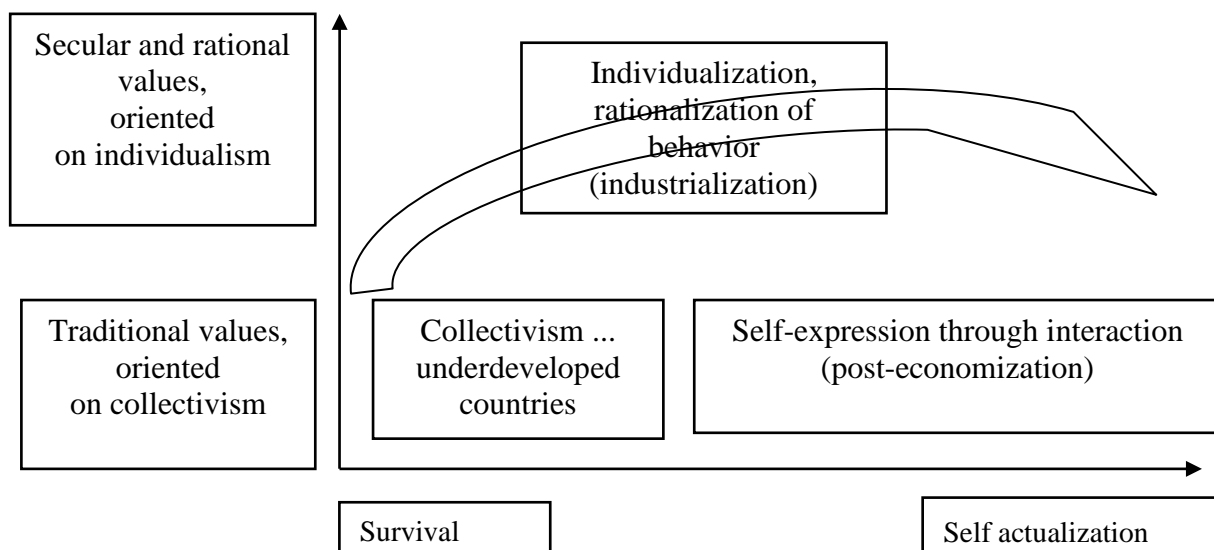
Perhaps, in the most pronounced form of the clash of views on the essence and content of the driving forces of human economic activity and economic culture in general, we find in the mythology of the "Invisible Hand". In the metaphor of the founder of classical political economy A. Smith, supporters of various currents of economics seek to justify their views. Who owns the invisible hand that ensures the coordinated interaction of many participants in the social reproduction process? According to supporters of the neoclassical trend - the market.

Prospects for the formation of the post-economic form of ensuring existence are associated with a radical transformation of the material and technological environment and the corresponding transformation of economic culture. (Inglehart, & Welzel, 2011).). Fig. 2 reflects the dynamics



of social orientations in the process of socio-economic development of society. At the initial stage, they are characterized by the strengthening of individualism, as a natural result of the spread during the modernization of society of secular and rational values. However, in the future, as a result of the transition from the values of survival to the values of self-expression, there is a partial return to communitarian social orientations. Social transformation defines through social changes in institutions, norms, values, and hierarchies, results in the formation of civil society. Thus, managing economic units as well as global business requires balancing forces between homogenization and differentiation (Nosova, 2020 b).

The paradoxical nature of the modern stage of the evolution of the ensuring the existing system is embodied in the formation of a new institutional model of capitalism - its glamorous version (Ivanov, 2011). Glamorous capitalism: the logic of the "super-new" economy. This process marks the turn of the United States and developed European countries from deindustrialization to the formation of large-scale re (neo) industrialization programs. There is an active form of transnational, global in the scope of production and marketing activities of glamorous industrial groups. The most successful among them are Apple, HTC, RIM, Nokia, Intel, HP, and Samsung. The production of real products as a tool to ensure business success is secondary. The profits of corporations of glamorous capitalism are achieved by inflating their prices by purposefully managing consumer behavior through the virtualization of the minds of potential customers.



**Fig. 2. The growing importance of community orientations of the value system in the formation of post-economy**

The tools are the mythologizing of consciousness through the imposition of such standards of consumption as blondness (purposeful formation of appearance as a tool for managing the consciousness of communication partners), luxury (exclusive consumption goes beyond functionality), exotics (creating standards of life, overcoming the limitations of life). (saturation with sexuality), pink (radical color solution). At the same time, through various ratings, hit

parades, and competitions, the "Big Ten" of artificially imposed on the consumer hierarchies of priorities is formed, which in turn structure communications, motivations, consumer preferences, turn subjective virtual representations into media and market reality - trend, fashion. It is no longer the creation of a product, brand advertising, but the formation of fashion for it, when consumer behavior is determined not by the objective qualities of the product but imposed on society, its evaluation as an exclusive becomes an instrument of success in the market. Glamorous capitalism is a reaction to the global financial crises caused by the speculative nature of financial capital, which has taken a dominant position in the world economy. It can be seen as an attempt at a forced partial return to the principles of social justification of the profits derived from productive activity laid down in the Catholic worldview.

There is an expansion of the range of tools that ensure the movement of goods in society. As part of the process of economic activity, their ambivalence is achieved in terms of the attitude of participants involved in economic interaction. What retains value for producers becomes valuable for consumers. Ultimately, what appears to the consumer as a *trata*, from the point of view of the producer is a super-profitable economic exchange (sale). How does such spending differ from the standard act of economic purchase of goods? The consumer agrees to the mismatch of value equivalents of counter-flows of goods and tokens of value. It is justified by the willingness to pay more for the created, thanks to the purchased goods, an exclusive individual image. In turn, this image is used as a tool for forming and maintaining social ties. The producer of glamorous goods in this case assumes the role of supreme mediator between the individual and those "higher powers" that are able to endow or confirm the special social status of the consumer. On the other hand, the costs are the costs of corporations for various marketing activities, which do not involve a direct return of the equivalent value but are aimed at forming the appropriate image of the company, and product. The activities of various non-profit organizations, local communities, charitable foundations, and volunteer structures are carried out on the basis of a gift, the radius of which extends far beyond the immediate environment.

**Conclusions** The study of the influence of culture in the evolution of forms of ensuring the existence of the organization of human economic activity, especially its institutional component, has deepened the understanding of the mechanisms and tools of its implementation. The results form the basis for improving the organization of interaction of elements of the institutional component of the economic system. The formation of the model of glamorous capitalism reflects the growing role and importance of the cultural factor in the formation, development, and heterogenization of modern forms of economic and post-economic relations.

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## **Wayang Sada (Sodo): A Media of Indonesian Language Learning and Cultural Introduction for Foreign Learners**

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### **Abstract**

Indonesia has about 718 regional languages that are unified by Indonesian as the national language (spoken by 90% of Indonesians). In addition, culture in Indonesia is also diverse, one of them is *wayang sada/sodo*. It is a puppet from sticks of young coconut leaves in the Gunungkidul area, Yogyakarta. The use of it in learning Indonesian language and culture is very interesting. Therefore, the objectives of this research are: (1) to explain the existence of *wayang sada/sodo* in Gunungkidul, Yogyakarta; (2) to explain the process of Indonesia language learning and cultural introduction using *wayang sada/sodo*; (3) to identify and strengthen Schumann's acculturation theory and Krashen's monitoring system theory with a combination of Paivio's dual coding theory on Indonesian language learning and cultural introduction. The research method is qualitative with an ethnographic approach. The data are collected by participatory observation (directly teaches Indonesian using *wayang sada/sodo*), social media observations (IG Lafida Int'l Institute—[lafida\\_ji](https://www.instagram.com/lafida_ji); about learning Indonesian language and culture based on cultural anthropology for foreigners managed by Nafila), in-depth interviews, documentation, and document studies on the use of interactive media in language and culture learning, especially Indonesia. The informant of this research are the foreign learners who learn Indonesian language (about 6 (six) learners). Then, the data are analyzed using the Miles and Huberman interactive model analysis (focus on descriptive, emotion, and values coding). The results of this research, are: (1) *wayang sada/sodo* is a puppet made of *sada/sodo* which means sticks of young coconut leaves, commonly found in the Gunungkidul area, Yogyakarta. *Wayang sada/sodo* is an artistic and cultural asset created by residents of Padukuhan Gunungbang, Bejiharjo Cultural Village, Karangmojo District which has become a new variety of *wayang* art; (2) Indonesian language learning and cultural introduction using *wayang sada/sodo* is very meaningful, interesting (attractive), interactive, introducing Indonesian culture directly, both offline and online; (3) the use of *wayang sada/sodo* can be a novelty of theory by strengthening and combining Schumann's acculturation theory (social and psychological factors with new cultural adjustment), Krashen's monitoring system theory (creative constructive process), and Paivio's dual coding theory (audio and visual) in Indonesian language learning as well as culture for foreign learners.

**Keywords:** Wayang *sada/sodo*, language learning, cultural introduction, foreign learners.

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## The Background

Indonesia is the largest archipelagic country. It is consisting of around 16,771 islands (in 2020) to 17,000 (in 2021). The addition of the island will later be registered at the 2022 United Nation Group of Experts on Geographical Names (UNGEGN) meeting [1]. The existence of islands has become a place for the distribution of different microcultures so that they are regionally specific. More than 300 ethnic groups spread throughout Indonesia. The largest is the population of Java (41%) who mostly occupy the island of Java. Others include, but are not limited to, the people of Malay, Batak, Betawi, Sundanese, and Madurese. Most ethnicities have a language, history and culture that is specifically related to them [2]. The hinterlands of Sumatra, Kalimantan and Papua feature ritualized speech and local epic narrative traditions, while in Java and Bali, the visual and performing arts are heavily influenced by the Hindu epics Mahabharata and Ramayana. [3].

Indonesian is included in the Austronesian language family which is one of the largest language families in the world. According to ethnologists, Indonesian is classified as follows: Indonesian < Local Malay < Malayan < Malaic < Sundic < Western < Malayo-Polynesian < Austronesian. Related languages include Javanese, Madurese, and Sundanese [4]. Actually, Indonesia has 718 regional languages [5] that are unified by Indonesian as the national language (spoken by 90% of Indonesians).

As we know, language is needed to communicate in community. Therefore, for some experts, it is said that language is one of the unique abilities of humans, including awareness, sociality, and culture to make meaning and communicate with other related to the imagined and remembered realities of the world, factual events, intentions, and desires [6]. On the other hands, the definition of language consists of language is systematic; is a set of arbitrary symbols those are primarily vocal, but may also be visual and have conventionalized meanings to which they refer; is used for communication; operates in a speech community or culture; is essentially human, although possibly not limited to humans; and is acquired by all people in much the same way; language and language learning both have universal characteristics [7]. Based on these opinions, it can be said that language is a unique symbol possessed by humans which has various functions to interact with others socially and culturally.

The development of language use is in line with the times so that the need for language use is not limited to the first language but also the second, third and so on. This is in line with the opinion that globalization with its global society has given rise to the need to understand cultural differences and communicate across cultural boundaries has increased exponentially [8]. Then, human is able to learn languages after the first language (L1) in bilingual and multilingual cases and the opportunity to master a second language (L2) came from travel, work, migration, war, marriage, and life events. [6]. This opinion emphasizes that the acquisition of a second language is a human ability to master a language after the first language, both in bilingual and multilingual conditions. Furthermore, it can be said that second language learning (LL2) is influenced by social and cultural conditions or context of the learners. It leads to learners' attitudes which appear in learners' motivation to learn L2.

Schumann's acculturation theory focuses on the process of social and psychological integration of second language learners (2LL) with the target language group (TL). Therefore, this acculturation model is based on social and psychological factors. The meaning of acculturation,

understood as a collection of socio-psychological factors, is the main cause of SLA [9] [10]. Thus, it can be interpreted that the acculturation model for L2 acquisition is influenced by social (conditions around learning, including culture) and psychological (comfort that encourages the creation of L2 learning motivation) received by the learner when studying L2 language dealing directly with native speakers.

Meanwhile Krashen's monitoring system shows that inputting plays an important role in the process of listening. The best method in the monitoring system model is to provide input that the learner can understand in a comfortable situation (without anxiety) and contains the messages that the learner really wants to hear. This method does not force initial production in L2 but allows students to produce it when they are 'ready' and language improvement can be made through communicative (understandable) input rather than forced and corrected production [11]. From the model it can be explained how 'acquisition' and 'learning' are used; the acquisition system initiates speech and the learning system 'monitors' speech to check for and correct errors in a comfortable situation (without anxiety) and the messages are interesting.

Then, Paivio dual coding theory asserts that there are two ways a person can expand learning materials, namely verbal associations and visual images [12]. This dual coding theory postulates that visual and verbal codes can be used when recalling information [13]. The theory can be understood that the learning process, especially L2 language learning can be supported by material that can be seen visually and heard verbally. The association of these two codes allows the learner to remember the information he has learned. Based on the three theories above, it can be postulated that language learning can be easily understood and learning is interesting if it pays attention to the social psychology of the learner by providing fun material input and associating that input with visual and verbal codes.

Actually, Indonesian society is a multicultural society which grows with a variety of cultural structures [14]. Therefore, the culture in Indonesia is also diverse which then presents local culture. As it is known that local culture contains local wisdom that can strengthen the local knowledge (indigenous knowledge) of the local community [15] [16], like *wayang sada/sodo*. *Wayang sada/sodo* is a coconut leaf sticks puppet in the Gunungkidul area, Yogyakarta. It is the work of Mbah Marsono from Padukuhan Gunungbang, Bejiharjo Cultural Village, Karangmojo District and has become a new variety in the world of *wayang* art [17]. Its use in learning Indonesian language and culture is very interesting for the learners because it can learn the language as well as get to know culture and see one of the cultural works of the Indonesian people directly, especially those in Yogyakarta. This condition can be seen from the initial observations which show that Indonesian language and cultural learners are very enthusiastic to know more about this *wayang*.

Therefore, the objectives of this research are: (1) to explain the existence of *wayang sada/sodo* in Gunungkidul, Yogyakarta. (2) To explain the process of Indonesia language learning and cultural introduction using *wayang sada/sodo*. (3) To identify and strengthen Schumann's acculturation theory and Krashen's monitoring system theory with a combination of Paivio's dual coding theory on Indonesian language learning and cultural introduction.

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## The Method

A qualitative design is used in this study with a critical paradigm to find new concept. This study also examines the cultural and local wisdom as a media of Indonesia language learning and cultural introduction (using *wayang sada/sodo*). So, this study uses an ethnographic approach. The ethnographic approach is based on anthropological and sociological studies that examine the conditions of behavior, language, and actions that take place in a cultural group naturally for a long time [18]. The informant of this research are the foreign learners who learn Indonesian language (about 6 (six) learners).

The data were collected by participatory observation (directly teaches Indonesian using *wayang sada/sodo*), social media observations (IG Lafida Int'l Institute—lafida\_ii; about learning Indonesian language and culture based on cultural anthropology for foreigners managed by Nafila), in-depth interviews, documentation, and document studies on the use of interactive media in language and culture learning, especially Indonesia. The data were collected since February-April 2022. Then, the data are analyzed using the Miles and Huberman interactive model analysis, especially for the observations and interviews data were reduced to several important notes by using a holistic coding method (determination, coding and coding, taking notes, and drawing conclusions); it is focused on descriptive, emotion, and values coding [19].

## Discussion

### The existence of *wayang sada/sodo* in Gunungkidul, Yogyakarta

*Wayang* (shadow puppets) crafts are generally made using animal skins, such as buffalo or cow skins since ancient times until they were recognized by UNESCO (United Nations Educational, Scientific and Cultural Organization). However, different from puppet crafts in general, Mbah Marsono or whose full name is Marsono Hadi Wardoyo (74 years), a resident of Padukuhan Gunungbang, Bejiharjo Village, Karangmojo District, Gunungkidul creates unique puppet creations that he makes from sticks of young coconut leaves (*sodo*). *Wayang* figures or characters still refer to the puppet figures of the Mahabharata and Ramayana stories and legends in Javanese society.

According to Mbah Marsono, he has been fond of making puppets and puppeteers since he was a child (since elementary school) because he aspired to be a puppeteer. However, he had to suppress this desire because the price of *wayang kulit* (shadow puppets) at that time was very expensive and difficult to find. Therefore, he was creative in making puppets from the grass around his house. Later, because the grass puppets were easily damaged, he also made puppets from sticks of young coconut leaves, which became known as *wayang sada/sodo*.

Mbah Marsono began to seriously pursue the made of *wayang sada/sodo* in 2011 after he retired from his job as an employee of PT. Pos Indonesian. Mbah Marsono can make 2 *wayang sada/sodo* every day or 60 puppets every month. The orders for *wayang sada/sodo* are also increasing, some are ordered for gifts, souvenirs, or for display at home. However, there are also those who buy to introduce culture to children (including me and team who ordered *wayang sada/sodo* for introducing Indonesian language and culture to foreign learners). Therefore, as he said, he made two kinds of *wayang sada/sodo*, namely *wayang* for performances and *wayang* for decoration.

*Wayang sada/sodo* for performances, he made in 28 characters, such as *arjuna*, *nakula*, *shintu* to *punakawan* (we ordered the characters of *arjuna* and *srikandi*). The *wayang sada/sodo* characters resemble the typical shadow puppet characters, but the curves of the characters are not as detailed as the shadow puppets. Meanwhile, *wayang* for decoration have various sizes, ranging from small and flat ones to large 3-dimensional ones. For the 3-dimensional, Mbah Marsono combined sticks, parts of the coconut tree (coconut flower wrapping midrib and coconut fiber as the binding material for the puppets). Then, the name of *wayang sada/sodo* characters that he created are also taken from the name of the part of the coconut tree with the Javanese name which has been modified to represent the character or with the aim of propriety and harmony aspects of names in *wayang*. This indicates the uniqueness of the *wayang sada/sodo* and the extraordinary creativity of Mbah Marsono.



**Figure 1.** Mbah Marsono

(Photo from [20]; on March 18, 2020)

Furthermore, according to Mbah Marsono, *wayang sada/sodo* is a wayang creation with the theme of being environmentally friendly, *go green*. Apart from using natural materials, *wayang* stories also raise the theme of the environment in their performances. So, through the appearance of *wayang sada/sodo* there is a message to preserve the environment. It's because *wayang sada/sodo* is made from coconut tree waste or from coconut parts that can be cultivated. In addition, the stories that are shown sometimes also talked about how to preserve the environment by representing the names of the characters from the parts of the coconut tree names in Javanese.



**Arjuna & Srikandi**

**Figure 2.** Wayang Sada/Sodo (Arjuna and Srikandi)



Moreover, to preserve the existence of *wayang sada/sodo*, Mbah Marsono taught this skill to a deaf child who was very talented and interested in wayang. She is Rofitasari Rahayu, a resident of Grogol V, Bejiharjo Village, Karangmojo District, which is a neighboring village with Mbah Marsono.

### **The process of Indonesia language learning and cultural introduction using *wayang sada/sodo***

Learning Indonesian and introducing culture using *wayang sada/sodo* is very meaningful because the learners can see directly the part of Indonesian culture that is a medium of learning. It can change the learners' views about Indonesian culture which is very diverse, as conveyed by the one of foreign learners, that:

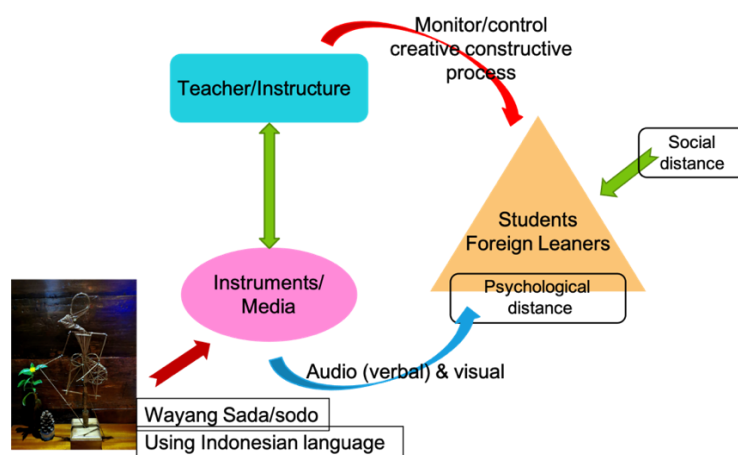
*"Learning Indonesian with wayang sada helps me get to know part of Indonesian culture".*

In addition to providing a meaningful learning process, the use of *wayang sada/sodo* is also very interesting for the learners so that it can motivate them to be more enthusiastic while learning. This motivation arises because *wayang sada/sodo* is a new thing for foreign learners so that it raises their curiosity to learn.

Then, learning Indonesian and introducing culture using *wayang sada/sodo* are also interactive because *wayang* demonstrations are used to get acquainted, share stories, and convey information, especially about Indonesian culture. For example, the use of *wayang* Arjuna is applied to introduce Arjuna's character, his passion (this is part of cultural information) by using Indonesian according to the rules, this is as stated by one of foreign learners, that:

*"I can get to know wayang characters and find out information about these characters besides learning Indonesian."*

Furthermore, *wayang* is used to convey assignments, either reading assignments or dictation with proper sentence structure. So, the language learning delivered can be in the form of reading and writing; hear and speak. This can help students remember the subject matter for a long time. In addition, as explained above, the use of *wayang sada/sodo* can also introduce Indonesian culture directly, both offline and online. The process of learning can be seen as below:



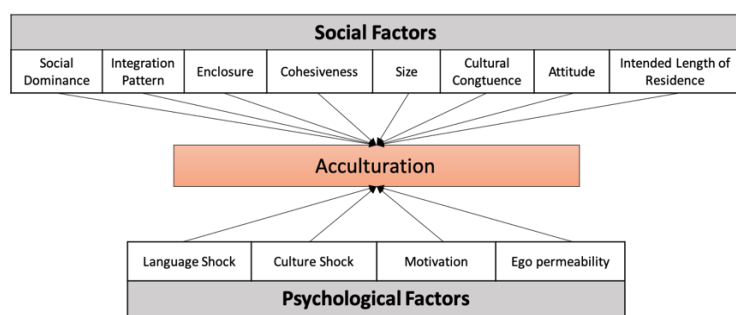
**Figure 3.** The process of Indonesia language learning and cultural introduction

using *wayang sada/sodo*

Thus, learning Indonesian and introducing culture using wayang sada/sodo can motivate foreign learners in an audio-visual way (in accordance with dual coding theory) with good control from the teacher with a constructive creative process (in accordance with input process as monitoring model) so as to reduce the social and psychological distance (in accordance with acculturation theory) of learners by knowing firsthand the socio-cultural conditions of Indonesia using wayang media. This can raise the interest of foreign students to learn Indonesian language and culture as well as keep memories of the richness of Indonesian culture.

**Identifying and strengthening Schumann's acculturation theory and Krashen's monitoring system with Paivio's dual coding theory on Indonesian language learning and cultural introduction.**

The acculturation model of L2 learning is influenced by social factors (conditions around learning, including culture) and psychological factors (the convenience of language learning that encourages the L2 learning motivation) that learners receive when learning L2 dealing directly with native speakers. In the case of using *wayang sada/sodo*, the learning process provides comfort for the learners with an interesting and interactive situation so as to create motivation to learn Indonesian language and culture.

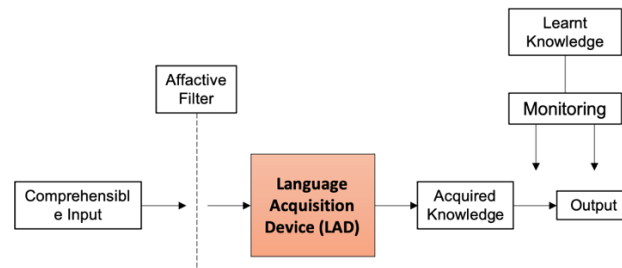


**Figure 4.** Schumann's acculturation model  
(based on Schumann's acculturation theory [9])

Figure 4 above is a model acculturation scheme adapted from acculturation theory by Schumann. There are social and psychological factors that influence the success of a second or foreign language learner, especially in learning Indonesian language and culture.

The monitoring system in L2 learning shows that input plays an important role in the process of listening to language use. The best method for processing input in this system is to convey something that is easily understood by the learners in a comfortable situation (without anxiety) and contains information that is really wanted to be heard by the learners. This method allows learners to learn L2 when they are 'ready' and language improvement can be done through communicative (understandable) input without coercion. So, it is understood that the acquisition process of initiating speech and the learning system 'monitoring' speech to check and correct errors can be carried out both in comfortable situations (without anxiety) and with interesting information. Related to this monitoring system, learning Indonesian language and culture with *wayang sada/sodo* can prepare learners with good motivation without coercion

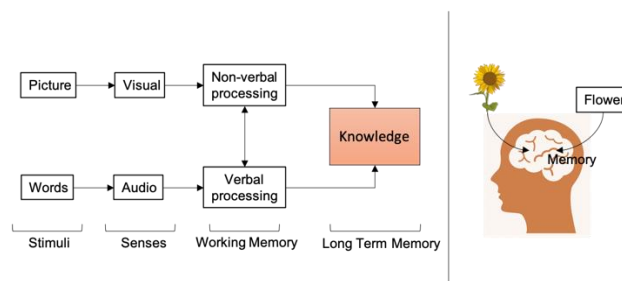
(but with interesting things) and with information that learners really want to hear, such as information on *wayang* characters being demonstrated using Indonesian which is in accordance with good and correct linguistic rules.



**Figure 5.** Input process  
(based on Krashen's monitoring model [11])

Figure 5 above is a schematic of the input process in the monitoring system adapted from the monitoring model by Krashen. There are factors of learner readiness (learning without coercion) and interesting information that affect the success of a second or foreign language learner, especially in learning Indonesian language and culture.

Furthermore, dual coding theory asserts that verbal associations and visual images can expand a learner's learning process (as well as L2 learning) and strengthen a learner's memory when recalling information. Thus, it can be understood that the learning process, especially L2 language learning can be supported by materials and media that can be seen visually and heard verbally. These two codes allow the learner to remember the information the learner has learned (long term memory). Therefore, the use of *wayang sada/sodo* in learning Indonesian (as an L2 or foreign language) and introduction to Indonesian culture can help learners to remember the subject matter for a long time. This is because the use of *wayang* media is related to visual codes (physical of *wayang* characters) and verbal codes (submission of information about *wayang* characters using Indonesian).



**Figure 6.** Verbal and non-verbal input knowledge  
(based on Paivio's dual coding theory [12])

Figure 6 above is the association scheme of visual and verbal (audio) codes adapted from Paivio's dual coding theory. The visual and verbal (audio) code factors affect the success of learners while learning, especially second or foreign language learners, which in this case is learning Indonesian language and culture.

Based on the explanation above, it can be conveyed a "new concept" in language learning and cultural introduction, especially Indonesia for foreign learners by using *wayang sada/sodo*, namely the "interactive socio-cultural model". The concept is based on the identification, association, and strengthening of three theories, namely the Schumann acculturation theory (especially with regard to social background and motivation—for psychological factors), Krashen monitoring model, and Paivio dual coding theory. Thus, the use of *wayang sada/sodo* media can make the learners easily understand the learning materials and the learning process becomes interesting if it pays attention to the psychological and social factors of learners by providing attractive and interactive material input (so that learners do not feel forced to learn) and associating this input with visual and verbal codes so that subject matter can be remembered for a long time (long term memory).

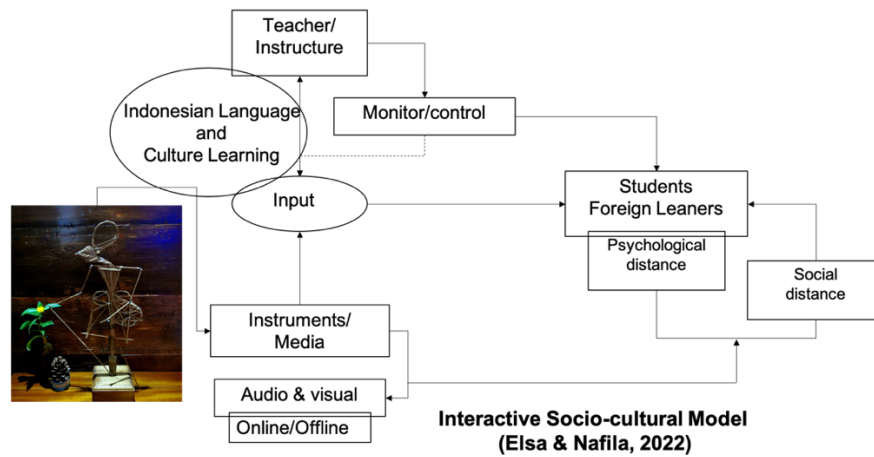
## Conclusions and Suggestion

### Conclusions

*Wayang sada/sodo* is a puppet made of *sada/sodo* which means young coconut leaf sticks, commonly found in the Gunungkidul area, Yogyakarta. *Wayang sada/sodo* is an artistic and cultural asset created by residents of Padukuhan Gunungbang, Bejiharjo Cultural Village, Karangmojo District which has become a new variety of *wayang* art;

Indonesian language learning and cultural introduction using *wayang sada/sodo* is very meaningful, interesting (attractive), interactive, introducing Indonesian culture directly, both offline and online; used audio-visually with good control from the teacher by creative constructive process so as to reduce the social and psychological distance of the student by knowing firsthand the social and cultural conditions of Indonesia with *wayang* media.

The use of *wayang sada/sodo* being a novelty of theory by strengthening and combining Schumann's acculturation theory (social and psychological factors with new cultural adjustment), Krashen's monitoring system theory (creative constructive process), and Paivio's dual coding theory (audio and visual) in Indonesian language learning as well as culture for foreign learners. The scheme of the novelty of concept (second/foreign language learning as well as culture) like below (interactive socio-cultural model):



**Figure 7.** The interactive socio-cultural model  
in second/foreign language learning and cultural introduction

### Suggestion

Every cultural instrument in other places in Indonesia or other countries can be researched and used as a media of language learning and cultural introduction for foreign learners.

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## **Relationship between shift work and job satisfaction: an empirical study among nurses**

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### **Abstract**

This survey, quantitative and empirical based descriptive research has been undertaken with the objective of analysing relationship between shift work and job satisfaction of nurses working in private multi-speciality hospitals in Tirunelveli city of Tamil Nadu, India. The study has sampled 80 nurses qualified with DGNM (Diploma in General Nursing and Midwifery) and B.Sc Nursing (Bachelor of Science in Nursing) using both convenience and judgement sampling techniques; and from the chosen respondents the primary data were collected using structured questionnaire along with interview. The secondary data were collected from books, journals and conference proceedings to add appropriate significance to the study. Percentage and weighted average method have been administered to analyse both demographic characteristics of the respondents, and perception of nurses towards shift work and job satisfaction related factors. The result of the study has discovered that majority of the respondents are highly dissatisfied with the following: two-shift work system with 12-hours duty, irregular schedule of shift, absence of seeking consent of staffs before scheduling shift work and not giving importance to the interest of the staffs in choosing their shift, and inadequate staff in department and performing additional work which has been left by opposite shift staff; and are dissatisfied with the following factors: inability to leave from the duty in time due to late arrival of opposite shift staff, inequality in the allocation of shift work, attitude of seniors to change the shift of juniors for their convenient, inadequate lighting facilities at night shift which induce headache and eye strain and inadequate catering facilities at night, and being extended the shift due to 'leave' or 'absent' of opposite shift staff while changing shift.

**Keywords:** Nurse, Shift work, Job satisfaction, Private multi-specialty hospital, Tirunelveli city



## **Comparison of different types of machine learning on remote education**

M. Bisen

### **Abstract**

The effects of Artificial Intelligence on today's world have been life changing, but how exactly has AI had an impact on humans? The motive for these observations is to provide others a better understanding of in what way AI enhances our learning experience for the greater and the differentiation to non-AI involving situations. While accounting multiple studies into comparison, this has helped us analyze these concepts. The use of AI results in a further more personalized experience with extended learning gains when put into comparison to standard computed programs, also enabling a finer learning experience. This document answers questions regarding the dependability and the outcomes of using AI and how AI works.

Keywords: Artificial Intelligence, machine learning, remote education